

#SC0409

Swift-CARB CNC™

A NEW TECH CUTTING TOOLS COMPANY

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WWW.SWIFTCARB.COM

**NOW OFFERING 2ND DAY
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RATES!**



SUPERBEE®

*Indexable Carbide Radius,
Angle, and Special Form
Cutters*

NEW-LUBE®

*Modular Micro-Spray
Applicators & Fluids*

PATENT NUMBER 5,086,878 AND 5,333,640

NEW TOOLS

“SD” Variable Pitch/ Helix Rougher/ Finishers

“SH” Variable Pitch/ Helix Steel Roughers

“DNCX” Long Reach NC Spot Drills

“XM” 7FL Exotic/ High Nickel Finisher

“ST” Steel Ramp & Run Series

“AT” Aluminum Ramp & Run Series

“AF5” 5FL Aluminum Finisher

“NL1M” NEW-LUBE Applicator

Coolant through Roughers
Standard Radii IN STOCK

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SwiftCARB
1720 Central Ave S
Kent, Wa. 98032

New Tech Cutting Tools, Inc.

PROUDLY MANUFACTURES:

Swift-CARB^{CNC™}

**Application Specific High
Performance Carbide Cutting
Tools**

NEW-LUBE®

**Modular Micro-Spray
Applicators & Fluids**

PATENT NUMBER 5,086,878 AND 5,333,640

SUPERBEE®

**Indexable Carbide Radius,
Angle, and Special Form
Cutters**

The New Tech Cutting Tools family of companies have been manufacturing application specific, standard, and custom high performance tooling in the Seattle area since 1960. For decades we have been called upon by industry leaders to develop machining "solutions" for their toughest applications and to excel beyond their previous machining capabilities.

The 2009 SwiftCARB catalog is an offering of those high performance solutions, heavily stocked to serve your most difficult machining needs!

SwiftCARB manufactures in controlled batch sizes to ensure the quality and consistency of our products by using the industry's most precise and efficient manufacturing equipment to grind only the highest quality Tungsten Carbide blanks available.

We invite you to try our tools and see what sets us apart from our competitors. From one-off R&D projects to the longest run production jobs, we have engineered solutions to decrease cycle times while improving tolerances and finishes which all lead to profitability..

Made in Kent, Wa.
U.S.A.



TRADE POLICIES

QUOTATIONS - All quotations are subject to change after 60 days. We also reserve the right to correct clerical errors on quotations or invoices. Quoted lead times on specials can be subject to change on a daily basis, depending on the lead between the quote date and the actual order date, especially in the case of expedited jobs.

PRICES - All prices in this catalog are subject to change without notice. Due to our ever changing economy, manufacturer's costs change frequently.

RETURNED GOODS - Call to make arrangements for a Returned Merchandise Authorization (RMA) number with our sales department **within 30 days of the invoice date** before returning. RMA paperwork must be **COMPLETELY** filled out, or the return will be subject to a 20% restock fee, or may be rejected. **ALL SPECIAL ORDERS AND MACHINABLE CARBIDE PRODUCTS ARE MADE TO ORDER AND ARE NOT RETURNABLE.**

OPEN ACCOUNTS - Our terms are Net 30 Days. Credit limits are reviewed on a daily basis, and are subject to change.

PRODUCT LIABILITY GUARANTEE - Our liability is limited to the value of any defective goods. We cannot assume labor charges, damage costs, or any other assessment resulting from misuse, defective, or imperfect material.

PRINT REVISIONS - Revised Catalogs will be printed on an approximate 1 year basis. We reserve the right to cancel, change, or modify any product we supply.

SHIPPING POLICIES- Standard stock items are shipped same day unless otherwise specified, for orders received by 3:30PST. All packages are shipped via UPS GROUND and are **insured for full invoice value**, unless otherwise requested. The Blue@Ground freight program is for orders over \$150, and under 10lbs. Ground rates are calculated as the current UPS ground price, plus the current fuel surcharge, and the insurance charge.

DAMAGED SHIPMENT POLICY- Any items received as damaged, due to improper handling or packaging, must be inspected on the spot to preserve your right to replacement tools. **DO NOT REMOVE TOOL FROM PACKAGE OR BOX FROM SHIPPING AREA, AND CONTACT NEW TECH OR UPS IMMEDIATELY.**

GUARENTEED TRIAL ORDERS (G.T.O.)- Would you like to try *SWIFT-CARB CNC*, *SUPERBEE®*, or *NEW-LUBE®*, products for 30 days at no obligation? Tell our sales department you'd like a GTO (Guaranteed Trial Order). We'll ask you about your application and if it fits the design capabilities of our product, we will guarantee the performance of the tool if used with the recommended method of speeds, feeds, and documentation. All valid GTO's are assigned a GTO number by the SwiftCARB sales dept.



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HIGH PERFORMANCE
CARBIDE TOOLS

SUPERBEE®

Indexable Carbide Radius, Angle, and Special Form Cutters

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NEW-LUBE®

Modular Micro-Spray Applicators & Fluids

PATENT NUMBER 5,086,878 AND 5,333,640

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Get Your End Mills With A Radius
Add these prices to the list price of the tool.



GET YOUR END MILLS WITH A RADIUS						
QTY-	1pc	2-5pc	6-10pc	11-20pc	21-29pc	30+pc
.012 - .090	22.50	18.50	16.00	12.00	8.00	5.00
.091 - .125	24.00	21.00	18.00	14.00	10.00	7.00
.126 - .160	26.50	24.00	20.00	16.00	12.00	8.00
.161 - .190	28.50	26.50	23.50	19.50	14.00	9.00
.191 - .250	36.50	35.00	30.00	24.00	18.00	10.00
STANDARD RADII IN STOCK!						

VARIABLE PITCH/HELIX ROUGHER/FINISHER 4FL

Series "SD" End Mills

STEEL VARIABLE PITCH/HELIX



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SWIFTCARB HIGH
PERFORMANCE CARBIDE



GET YOUR END MILLS WITH A RADIUS						
QTY-	1pc	2-5pc	6-10pc	11-20pc	21-29pc	30+pc
.012 - .090	22.50	18.50	16.00	12.00	8.00	5.00
.091 - .125	24.00	21.00	18.00	14.00	10.00	7.00
.126 - .160	26.50	24.00	20.00	16.00	12.00	8.00
.161 - .190	28.50	26.50	23.50	19.50	14.00	9.00
.191 - .250	36.50	35.00	30.00	24.00	18.00	10.00

STANDARD RADII IN STOCK!

NEW NUMBER	DIA	FLUTES	LOC	OAL	PRICE
SD037548I001S10M	3/8	4	1/2	2	34.55
SD03754BU003S10M	3/8	4	3/4	2 1/2	36.12
SD03754CA003S10M	3/8	4	7/8	2 1/2	38.61
SD03754CS005S10M	3/8	4	1	3	42.40
SD03754DG005S10M	3/8	4	1 1/4	3	47.12
SD03754E6007S10M	3/8	4	1 1/2	3 1/2	51.28
SD03754EW007S10M	3/8	4	1 3/4	3 1/2	53.40
SD03754FK009S10M	3/8	4	2	4	54.97
SD03754GS009S10M	3/8	4	2 1/2	4	56.11
SD043748I003S10M	7/16	4	1/2	2 1/2	47.28
SD04374A6003S10M	7/16	4	5/8	2 1/2	50.08
SD04374CA005S10M	7/16	4	7/8	3	53.09
SD04374CS005S10M	7/16	4	1	3	54.98
SD04374DG005S10M	7/16	4	1 1/4	3	57.71
SD04374E6007S10M	7/16	4	1 1/2	3 1/2	61.28
SD04374EW009S10M	7/16	4	1 3/4	4	62.95
SD04374FK009S10M	7/16	4	2	4	65.16
SD04374HY00ES10M	7/16	4	3	5	73.61
SD05004A6003S10M	1/2	4	5/8	2 1/2	60.33
SD05004CS005S10M	1/2	4	1	3	65.16
SD05004DG005S10M	1/2	4	1 1/4	3	69.99
SD05004E6007S10M	1/2	4	1 1/2	3 1/2	74.82
SD05004EW009S10M	1/2	4	1 3/4	4	79.65
SD05004FK009S10M	1/2	4	2	4	84.48
SD05004G6009S10M	1/2	4	2 1/4	4	89.30
SD05004GS00ES10M	1/2	4	2 1/2	5	95.94
SD05004HY00ES10M	1/2	4	3	5	108.61
SD05624E6007S10M	9/16	4	1 1/2	3 1/2	118.82
SD05624FK009S10M	9/16	4	2	4	131.97
SD05624HY00ES10M	9/16	4	3	5	175.04
SD06254BU005S10M	5/8	4	3/4	3	116.45
SD06254DG007S10M	5/8	4	1 1/4	3 1/2	123.69
SD06254EI007S10M	5/8	4	1 5/8	3 1/2	148.43
SD06254FK009S10M	5/8	4	2	4	161.50
SD06254G600ES10M	5/8	4	2 1/4	5	177.48
SD06254GS00ES10M	5/8	4	2 1/2	5	193.47
SD06254HY00ES10M	5/8	4	3	5	223.87
SD06254I100S10M	5/8	4	3 1/4	6	263.78

NEW NUMBER	DIA	FLUTES	LOC	OAL	PRICE
SD07504BU005S10M	3/4	4	3/4	3	172.57
SD07504CS007S10M	3/4	4	1	3 1/2	175.52
SD07504DG007S10M	3/4	4	1 1/4	3 1/2	179.99
SD07504E6007S10M	3/4	4	1 1/2	3 1/2	181.77
SD07504EW009S10M	3/4	4	1 3/4	4	183.43
SD07504G600ES10M	3/4	4	2 1/4	5	211.20
SD07504GS00ES10M	3/4	4	2 1/2	5	223.44
SD07504HC00ES10M	3/4	4	2 3/4	5	241.52
SD07504HY00ES10M	3/4	4	3	5	261.28
SD07504I100S10M	3/4	4	3 1/4	6	281.03
SD07504J400S10M	3/4	4	3 1/2	6	300.79
SD07504KA00S10M	3/4	4	4	6	320.55
SD07504LG00LS10M	3/4	4	4 1/2	7	340.30
SD08754EI009S10M	7/8	4	1 5/8	4	229.18
SD08754H200ES10M	7/8	4	2 5/8	5	285.40
SD08754HY00ES10M	7/8	4	3	5	307.41
SD08754JQ00S10M	7/8	4	3 3/4	6	362.69
SD10004E6009S10M	1	4	1 1/2	4	273.35
SD10004FK00BS10M	1	4	2	4 1/2	296.06
SD10004GG00ES10M	1	4	2 3/8	5	316.80
SD10004H200ES10M	1	4	2 5/8	5	338.85
SD10004HY00S10M	1	4	3	6	357.22
SD10004IU00S10M	1	4	3 3/8	6	384.29
SD10004JE00S10M	1	4	3 5/8	6	413.44
SD10004KK00LS10M	1	4	4 1/8	7	450.15
SD10004LG00LS10M	1	4	4 1/2	7	486.86
SD10004MM00PS10M	1	4	5	8	523.56
SD12504E6009S10M	1 1/4	4	1 1/2	4	384.40
SD12504G600BS10M	1 1/4	4	2 1/4	4 1/2	411.53
SD12504HY00S10M	1 1/4	4	3	6	461.40
SD12504JE00S10M	1 1/4	4	3 5/8	6	496.11
SD12504L600NS10M	1 1/4	4	4 3/8	7 1/2	534.96



EXTENDED LENGTH

VARIABLE PITCH/HELIX ROUGHER/FINISHER 4FL

Series "SD" End Mills

STEEL VARIABLE PITCH/HELIX

NEW NUMBER	DIA	FLUTES	LOC	LBS	OAL	PRICE
SD037548IBU3S10M	3/8	4	1/2	3/4	2 1/2	58.97
SD037548ID4S10M	3/8	4	1/2	1 1/8	3	60.97
SD037548IE6S10M	3/8	4	1/2	1 1/2	3	62.97
SD037548IF87S10M	3/8	4	1/2	1 7/8	3 1/2	64.97
SD037548IFW9S10M	3/8	4	1/2	2 1/8	4	91.57
SD037548IGS9S10M	3/8	4	1/2	2 1/2	4	99.68
SD037548II8ES10M	3/8	4	1/2	3 1/8	5	126.86
SD037548IKKIS10M	3/8	4	1/2	4 1/8	6	159.86
SD05004A6E67S10M	1/2	4	5/8	1 1/2	3 1/2	76.59
SD05004A6FK9S10M	1/2	4	5/8	2	4	86.27
SD05004A6G69S10M	1/2	4	5/8	2 1/4	4	95.94
SD05004A6H2ES10M	1/2	4	5/8	2 5/8	5	105.62
SD05004A6HYES10M	1/2	4	5/8	3	5	115.29
SD05004A6IUES10M	1/2	4	5/8	3 3/8	5	124.97
SD05004A6JEIS10M	1/2	4	5/8	3 5/8	6	134.64
SD05004A6KKIS10M	1/2	4	5/8	4 1/8	6	169.96
SD06254BUEI9S10M	5/8	4	3/4	1 5/8	4	146.87
SD06254BUFK9S10M	5/8	4	3/4	2	4	154.29
SD06254BUGGCS10M	5/8	4	3/4	2 3/8	4 5/8	161.71
SD06254BUHYES10M	5/8	4	3/4	3	5	169.14
SD06254BUIUIS10M	5/8	4	3/4	3 3/8	6	179.82
SD06254BUJQIS10M	5/8	4	3/4	3 3/4	6	190.50
SD06254BUKKIS10M	5/8	4	3/4	4 1/8	6	201.18
SD06254BUMMLS10M	5/8	4	3/4	5	7	239.68
SD07504CSFK9S10M	3/4	4	1	2	4	202.10
SD07504CSG6ES10M	3/4	4	1	2 1/4	5	208.86
SD07504CSH2ES10M	3/4	4	1	2 5/8	5	215.62
SD07504CSHYES10M	3/4	4	1	3	5	221.73
SD07504CSIUIS10M	3/4	4	1	3 3/8	6	235.24
SD07504CSJQIS10M	3/4	4	1	3 3/4	6	248.75
SD07504CSKKIS10M	3/4	4	1	4 1/8	6	262.26
SD07504CSMMLS10M	3/4	4	1	5	7	278.74
SD07504CSQ0PS10M	3/4	4	1	6	8	339.36
SD10004DGG6BS10M	1	4	1 1/4	2 1/4	4 1/2	359.04
SD10004DGH2ES10M	1	4	1 1/4	2 5/8	5	369.95
SD10004DGHYGS10M	1	4	1 1/4	3	5 1/2	376.35
SD10004DGIUIS10M	1	4	1 1/4	3 3/8	6	388.00
SD10004DGJQIS10M	1	4	1 1/4	3 3/4	6	409.13
SD10004DGKWS10M	1	4	1 1/4	4 1/4	6 1/2	430.25
SD10004DGM2LS10M	1	4	1 1/4	4 3/4	7	451.38
SD10004DGPEPS10M	1	4	1 1/4	5 3/4	8	472.50
SD10004DGRSRS10M	1	4	1 1/4	6 3/4	9	499.97



STEEL VARIABLE PITCH/HELIX ROUGHER 4FL

Series "SH" End Mills

VARIABLE PITCH/HELIX HEAVY ROUGHER



PATENT PENDING

8 SWIFTCARB HIGH PERFORMANCE CARBIDE



NEW NUMBER	DIA	FLUTES	LOC	OAL	RADIUS	PRICE
SH037548I001T60M	3/8	4	1/2	2	0.030	38.00
SH03754BU003T60M	3/8	4	3/4	2 1/2	0.030	39.73
SH03754CA003T60M	3/8	4	7/8	2 1/2	0.030	42.47
SH03754CS005T60M	3/8	4	1	3	0.030	46.64
SH03754DG005T60M	3/8	4	1 1/4	3	0.030	51.83
SH03754E6007T60M	3/8	4	1 1/2	3 1/2	0.030	56.40
SH03754EW007T60M	3/8	4	1 3/4	3 1/2	0.030	58.74
SH03754FK009T60M	3/8	4	2	4	0.030	60.46
SH03754GS009T60M	3/8	4	2 1/2	4	0.030	61.72
SH043748I003TCOM	7/16	4	1/2	2 1/2	0.060	52.00
SH04374A6003TCOM	7/16	4	5/8	2 1/2	0.060	55.08
SH04374CA005TCOM	7/16	4	7/8	3	0.060	58.39
SH04374CS005TCOM	7/16	4	1	3	0.060	60.47
SH04374DG005TCOM	7/16	4	1 1/4	3	0.060	63.48
SH04374E6007TCOM	7/16	4	1 1/2	3 1/2	0.060	67.40
SH04374EW009TCOM	7/16	4	1 3/4	4	0.060	69.24
SH04374FK009TCOM	7/16	4	2	4	0.060	71.67
SH04374HY00ETCOM	7/16	4	3	5	0.060	80.97
SH05004A6003TCOM	1/2	4	5/8	2 1/2	0.060	66.36
SH05004CS005TCOM	1/2	4	1	3	0.060	71.67
SH05004DG005TCOM	1/2	4	1 1/4	3	0.060	76.98
SH05004E6007TCOM	1/2	4	1 1/2	3 1/2	0.060	82.30
SH05004EW009TCOM	1/2	4	1 3/4	4	0.060	87.61
SH05004FK009TCOM	1/2	4	2	4	0.060	92.92
SH05004G6009TCOM	1/2	4	2 1/4	4	0.060	98.23
SH05004GS00ETCOM	1/2	4	2 1/2	5	0.060	105.53
SH05004HY00ETCOM	1/2	4	3	5	0.060	119.47
SH05624E6007TCOM	9/16	4	1 1/2	3 1/2	0.060	130.70
SH05624FK009TCOM	9/16	4	2	4	0.060	145.16
SH05624HY00ETCOM	9/16	4	3	5	0.060	192.54
SH06254BU005TCOM	5/8	4	3/4	3	0.060	128.09
SH06254DG007TCOM	5/8	4	1 1/4	3 1/2	0.060	136.05
SH06254EI007TCOM	5/8	4	1 5/8	3 1/2	0.060	163.27
SH06254FK009TCOM	5/8	4	2	4	0.060	177.65
SH06254G600ETCOM	5/8	4	2 1/4	5	0.060	195.22
SH06254GS00ETCOM	5/8	4	2 1/2	5	0.060	212.81
SH06254HY00ETCOM	5/8	4	3	5	0.060	246.25
SH06254I00ITCOM	5/8	4	3 1/4	6	0.060	290.15

NEW NUMBER	DIA	FLUTES	LOC	OAL	RADIUS	PRICE
SH07504BU005TCOM	3/4	4	3/4	3	0.060	189.82
SH07504CS007TCOM	3/4	4	1	3 1/2	0.060	193.07
SH07504DG007TCOM	3/4	4	1 1/4	3 1/2	0.060	197.98
SH07504E6007TCOM	3/4	4	1 1/2	3 1/2	0.060	199.94
SH07504EW009TCOM	3/4	4	1 3/4	4	0.060	201.77
SH07504G600ETCOM	3/4	4	2 1/4	5	0.060	232.32
SH07504GS00ETCOM	3/4	4	2 1/2	5	0.060	245.78
SH07504HC00ETCOM	3/4	4	2 3/4	5	0.060	265.67
SH07504HY00ETCOM	3/4	4	3	5	0.060	287.40
SH07504I00ITCOM	3/4	4	3 1/4	6	0.060	309.13
SH07504J400ITCOM	3/4	4	3 1/2	6	0.060	330.86
SH07504KA00ITCOM	3/4	4	4	6	0.060	352.60
SH07504LG00LTCOM	3/4	4	4 1/2	7	0.060	374.33
SH08754EI009TCOM	7/8	4	1 5/8	4	0.060	252.09
SH08754H200ETCOM	7/8	4	2 5/8	5	0.060	313.94
SH08754HY00ETCOM	7/8	4	3	5	0.060	338.15
SH08754JQ00ITCOM	7/8	4	3 3/4	6	0.060	398.95
SH10004E6009TCOM	1	4	1 1/2	4	0.060	300.68
SH10004FK00BTCOM	1	4	2	4 1/2	0.060	325.66
SH10004GG00ETCOM	1	4	2 3/8	5	0.060	348.48
SH10004H200ETCOM	1	4	2 5/8	5	0.060	372.73
SH10004HY00ITCOM	1	4	3	6	0.060	392.94
SH10004IU00ITCOM	1	4	3 3/8	6	0.060	422.71
SH10004JE00ITCOM	1	4	3 5/8	6	0.060	454.78
SH10004KK00LTCOM	1	4	4 1/8	7	0.060	495.16
SH10004LG00LTCOM	1	4	4 1/2	7	0.060	535.54
SH10004MM00PTCOM	1	4	5	8	0.060	575.91
SH12504E6009TCOM	1 1/4	4	1 1/2	4	0.060	422.84
SH12504G600BTCOM	1 1/4	4	2 1/4	4 1/2	0.060	452.68
SH12504HY00ITCOM	1 1/4	4	3	6	0.060	507.54
SH12504JE00ITCOM	1 1/4	4	3 5/8	6	0.060	545.72
SH12504L600NTCOM	1 1/4	4	4 3/8	7 1/2	0.060	588.45
SH12504MY00NTCOM	1 1/4	4	5 1/8	7 1/2	0.060	631.43
SH12504Q000RTCOM	1 1/4	4	6	9	0.060	674.41
SH12504R600RTCOM	1 1/4	4	6 1/2	9	0.060	717.38

*THE RADII ON "SH" SERIES TOOLS ARE TRUNCATED AND ARE UNSUITABLE FOR FINISHING TOLERANCES



EXTENDED LENGTH VARIABLE PITCH/HELIX HEAVY ROUGHER 4FL Series "SHEL" End Mills VARIABLE PITCH/HELIX HEAVY ROUGHER



PATENT PENDING

NEW NUMBER	DIA	FLUTES	LOC	LBS	OAL	*RAD	COATING	PRICE
SH037548IBU3T60M	3/8	4	1/2	3/4	2 1/2	0.030	MDC	64.86
SH037548ID45T60M	3/8	4	1/2	1 1/8	3	0.030	MDC	67.06
SH037548IE65T60M	3/8	4	1/2	1 1/2	3	0.030	MDC	69.26
SH037548IF87T60M	3/8	4	1/2	1 7/8	3 1/2	0.030	MDC	71.46
SH037548IFW9T60M	3/8	4	1/2	2 1/8	4	0.030	MDC	100.72
SH037548IGS9T60M	3/8	4	1/2	2 1/2	4	0.030	MDC	109.64
SH037548II8ET60M	3/8	4	1/2	3 1/8	5	0.030	MDC	139.54
SH037548IKKIT60M	3/8	4	1/2	4 1/8	6	0.030	MDC	175.84
SH05004A6E67TC0M	1/2	4	5/8	1 1/2	3 1/2	0.060	MDC	84.24
SH05004A6FK9TC0M	1/2	4	5/8	2	4	0.060	MDC	94.89
SH05004A6G69TC0M	1/2	4	5/8	2 1/4	4	0.060	MDC	105.53
SH05004A6H2ETC0M	1/2	4	5/8	2 5/8	5	0.060	MDC	116.18
SH05004A6HYETC0M	1/2	4	5/8	3	5	0.060	MDC	126.81
SH05004A6IUETC0M	1/2	4	5/8	3 3/8	5	0.060	MDC	137.46
SH05004A6JEITC0M	1/2	4	5/8	3 5/8	6	0.060	MDC	148.10
SH05004A6KKITC0M	1/2	4	5/8	4 1/8	6	0.060	MDC	186.95
SH06254BUEI9TC0M	5/8	4	3/4	1 5/8	4	0.060	MDC	161.55
SH06254BUFK9TC0M	5/8	4	3/4	2	4	0.060	MDC	169.71
SH06254BUGGCTC0M	5/8	4	3/4	2 3/8	4 5/8	0.060	MDC	177.88
SH06254BUHYETC0M	5/8	4	3/4	3	5	0.060	MDC	186.05
SH06254BUJUITC0M	5/8	4	3/4	3 3/8	6	0.060	MDC	197.80
SH06254BUJQITC0M	5/8	4	3/4	3 3/4	6	0.060	MDC	209.55
SH06254BUKKITC0M	5/8	4	3/4	4 1/8	6	0.060	MDC	221.29
SH06254BUMMLTC0M	5/8	4	3/4	5	7	0.060	MDC	263.64
SH07504CSFK9TC0M	3/4	4	1	2	4	0.060	MDC	222.31
SH07504CSG6ETC0M	3/4	4	1	2 1/4	5	0.060	MDC	229.74
SH07504CSH2ETC0M	3/4	4	1	2 5/8	5	0.060	MDC	237.18
SH07504CSHYETC0M	3/4	4	1	3	5	0.060	MDC	243.90
SH07504CSIUITC0M	3/4	4	1	3 3/8	6	0.060	MDC	258.76
SH07504CSJQITC0M	3/4	4	1	3 3/4	6	0.060	MDC	273.62
SH07504CSKKITC0M	3/4	4	1	4 1/8	6	0.060	MDC	288.48
SH07504CSMMLTC0M	3/4	4	1	5	7	0.060	MDC	306.61
SH07504CSQ0PTC0M	3/4	4	1	6	8	0.060	MDC	373.29
SH10004DGG6BTC0M	1	4	1 1/4	2 1/4	4 1/2	0.060	MDC	394.94
SH10004DGH2ETC0M	1	4	1 1/4	2 5/8	5	0.060	MDC	406.94
SH10004DGHYGT0M	1	4	1 1/4	3	5 1/2	0.060	MDC	413.98
SH10004DGIUITC0M	1	4	1 1/4	3 3/8	6	0.060	MDC	426.80
SH10004DGJQITC0M	1	4	1 1/4	3 3/4	6	0.060	MDC	450.04
SH10004DGKWKTC0M	1	4	1 1/4	4 1/4	6 1/2	0.060	MDC	473.27
SH10004DGM2LTC0M	1	4	1 1/4	4 3/4	7	0.060	MDC	496.51
SH10004DGPEPTC0M	1	4	1 1/4	5 3/4	8	0.060	MDC	519.75
SH10004DGRSRTC0M	1	4	1 1/4	6 3/4	9	0.060	MDC	549.96

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SWIFTCARB HIGH
PERFORMANCE CARBIDE



*THE RADII ON "SH" SERIES TOOLS ARE TRUNCATED AND ARE UNSUITABLE FOR FINISHING TOLERANCES



STEEL RAMP AND RUN SERIES 5FL Series "ST" End Mills FOR HEAVY RAMPING AND POCKETING

TRUeMill[®] CERTIFIED END MILLS



PATENT PENDING

Our Ramp & Run Series end mills, are designed to ramp at angles that were previously unattainable, and run at high speeds on the floor, drastically reducing cycle times and minimizing tool changes.

- Reduce Cycle times by 30-600%
- 2X-4X Longer Tool Life
- Ramp angles up to 10°
- Mill Holes Faster Than Drilling In Many Applications

AVAILABLE WITH
COOLANT HOLE

NEW NUMBER	OLD #	DIA	FLUTES	LOC	OAL	*RAD	COATING	PRICE	COOLANT THOUGH	PRICE
ST018754E001T30M	STS125CB015MDC	3/16	5	3/16	2	0.015	MDC	31.65	N/A	
ST018755M001T30M	STR125CB015MDC	3/16	5	9/32	2	0.015	MDC	33.80	N/A	
ST018756W001T30M	STM125CB015MDC	3/16	5	3/8	2	0.015	MDC	36.23	N/A	
ST0250558001T60M	STS165CB030MDC	1/4	5	1/4	2	0.030	MDC	33.44	ST0250558001T6CM	47.19
ST025056W001T60M	STR165CB030MDC	1/4	5	3/8	2	0.030	MDC	35.71	ST025056W001T6CM	49.46
ST025058I001T60M	STM165CB030MDC	1/4	5	1/2	2	0.030	MDC	38.18	ST025058I001T6CM	51.93
ST0312562001T60M	STS205CB030MDC	5/16	5	5/16	2	0.030	MDC	41.88	ST0312562001T6CM	57.61
ST0312584001T60M	STR205CB030MDC	5/16	5	15/32	2	0.030	MDC	45.36	ST0312584001T6CM	61.09
ST03125A6001T60M	STM205CB030MDC	5/16	5	5/8	2	0.030	MDC	49.69	ST03125A6001T6CM	65.42
ST037556W001T60M	STS245CB030MDC	3/8	5	3/8	2	0.030	MDC	49.89	ST037556W001T6CM	67.21
ST037559C003T60M	STR245CB030MDC	3/8	5	9/16	2 1/2	0.030	MDC	54.76	ST037559C003T6CM	72.08
ST03755BU003T60M	STM245CB030MDC	3/8	5	3/4	2 1/2	0.030	MDC	62.89	ST03755BU003T6CM	80.21
ST043757Q004TC0M	STS285CB060MDC	7/16	5	7/16	2 3/4	0.060	MDC	54.75	ST043757Q004TCCM	72.81
ST04375AK004TC0M	STR285CB060MDC	7/16	5	21/32	2 3/4	0.060	MDC	61.98	ST04375AK004TCCM	80.04
ST04375CA005TC0M	STM285CB060MDC	7/16	5	7/8	3	0.060	MDC	72.37	ST04375CA005TCCM	90.43
ST050058I003TC0M	STS325CB060MDC	1/2	5	1/2	2 1/2	0.060	MDC	59.60	ST050058I003TCCM	81.18
ST05005BU005TC0M	STR325CB060MDC	1/2	5	3/4	3	0.060	MDC	69.45	ST05005BU005TCCM	91.03
ST05005CS005TC0M	STM325CB060MDC	1/2	5	1	3	0.060	MDC	79.81	ST05005CS005TCCM	101.39
ST06255A6005TC0M	STS405CB060MDC	5/8	5	5/8	3	0.060	MDC	109.39	ST06255A6005TCCM	132.25
ST06255CI005TC0M	STR405CB060MDC	5/8	5	8/9	3	0.060	MDC	119.82	ST06255CI005TCCM	142.68
ST06255DG007TC0M	STM405CB060MDC	5/8	5	1 1/4	3 1/2	0.060	MDC	129.74	ST06255DG007TCCM	152.60
ST07505BU005TC0M	STS485CB060MDC	3/4	5	3/4	3	0.060	MDC	149.92	ST07505BU005TCCM	166.82
ST07505D4007TC0M	STR485CB060MDC	3/4	5	1 1/8	3 1/2	0.060	MDC	164.20	ST07505D4007TCCM	189.95
ST07505E6007TC0M	STM485CB060MDC	3/4	5	1 1/2	3 1/2	0.060	MDC	179.68	ST07505E6007TCCM	205.43
ST08755CA007TC0M	STS565CB060MDC	7/8	5	7/8	3 1/2	0.060	MDC	199.31	ST08755CA007TCCM	223.10
ST08755DM007TC0M	STR565CB060MDC	7/8	5	1 5/16	3 1/2	0.060	MDC	218.42	ST08755DM007TCCM	242.21
ST08755EW009TC0M	STM565CB060MDC	7/8	5	1 3/4	4	0.060	MDC	229.73	ST08755EW009TCCM	253.52
ST10005CS009TC0M	STS645CB060MDC	1	5	1	4	0.060	MDC	241.18	ST10005CS009TCCM	268.32
ST10005E6009TC0M	STR645CB060MDC	1	5	1 1/2	4	0.060	MDC	258.74	ST10005E6009TCCM	285.88
ST10005FK00BTC0M	STM645CB060MDC	1	5	2	4 1/2	0.060	MDC	279.65	ST10005FK00BTCCM	306.79

*THE RADII ON "ST" SERIES TOOLS ARE TRUNCATED AND ARE UNSUITABLE FOR FINISHING TOLERANCES

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SWIFTCARB HIGH
PERFORMANCE CARBIDE



EXTENDED STEEL RAMP AND RUN SERIES 5FL Series "STEL" End Mills FOR LONG REACH HEAVY RAMPING AND POCKETING

TRUeMill[®] CERTIFIED END MILLS



PATENT PENDING

NEW NUMBER	DIA	FLUTES	LOC	LBS	OAL	RADIUS	COATING	PRICE
ST037559CBU3T60M	3/8	5	9/16	3/4	2 1/2	0.030	MDC	64.86
ST037559CD45T60M	3/8	5	9/16	1 1/8	3	0.030	MDC	67.06
ST037559CE65T60M	3/8	5	9/16	1 1/2	3	0.030	MDC	69.26
ST037559CF87T60M	3/8	5	9/16	1 7/8	3 1/2	0.030	MDC	71.46
ST037559CFW9T60M	3/8	5	9/16	2 1/8	4	0.030	MDC	100.72
ST037556WGS9T60M	3/8	5	3/8	2 1/2	4	0.030	MDC	109.64
ST037556W18ET60M	3/8	5	3/8	3 1/8	5	0.030	MDC	139.54
ST037556WKKIT60M	3/8	5	3/8	4 1/8	6	0.030	MDC	175.84
ST05005BUE67TC0M	1/2	5	3/4	1 1/2	3 1/2	0.060	MDC	84.24
ST05005BUFK9TC0M	1/2	5	3/4	2	4	0.060	MDC	94.89
ST05005BUG69TC0M	1/2	5	3/4	2 1/4	4	0.060	MDC	105.53
ST05005BUH2ETC0M	1/2	5	3/4	2 5/8	5	0.060	MDC	116.18
ST050058IHYETC0M	1/2	5	1/2	3	5	0.060	MDC	126.81
ST050058IUETC0M	1/2	5	1/2	3 3/8	5	0.060	MDC	137.46
ST050058IJEITC0M	1/2	5	1/2	3 5/8	6	0.060	MDC	148.10
ST050058IKKITC0M	1/2	5	1/2	4 1/8	6	0.060	MDC	186.95
ST06255CIEI9TC0M	5/8	5	15/16	1 5/8	4	0.060	MDC	161.55
ST06255CIFK9TC0M	5/8	5	15/16	2	4	0.060	MDC	169.71
ST06255CIGGCTC0M	5/8	5	15/16	2 3/8	4 5/8	0.060	MDC	177.88
ST06255CIHYETC0M	5/8	5	15/16	3	5	0.060	MDC	186.05
ST06255CIUITC0M	5/8	5	15/16	3 3/8	6	0.060	MDC	197.80
ST06255A6JQITC0M	5/8	5	5/8	3 3/4	6	0.060	MDC	209.55
ST06255A6KKITC0M	5/8	5	5/8	4 1/8	6	0.060	MDC	221.29
ST06255A6MMLTC0M	5/8	5	5/8	5	7	0.060	MDC	263.64
ST07505D4FK9TC0M	3/4	5	1 1/8	2	4	0.060	MDC	222.31
ST07505D4G6ETC0M	3/4	5	1 1/8	2 1/4	5	0.060	MDC	229.74
ST07505D4H2ETC0M	3/4	5	1 1/8	2 5/8	5	0.060	MDC	237.18
ST07505D4HYETC0M	3/4	5	1 1/8	3	5	0.060	MDC	243.90
ST07505D4IUITC0M	3/4	5	1 1/8	3 3/8	6	0.060	MDC	258.76
ST07505D4JQITC0M	3/4	5	1 1/8	3 3/4	6	0.060	MDC	273.62
ST07505BUKKITC0M	3/4	5	3/4	4 1/8	6	0.060	MDC	288.48
ST07505BUMMLTC0M	3/4	5	3/4	5	7	0.060	MDC	306.61
ST07505BUQ0PTC0M	3/4	5	3/4	6	8	0.060	MDC	373.29
ST10005E6G6BTC0M	1	5	1 1/2	2 1/4	4 1/2	0.060	MDC	394.94
ST10005E6H2ETC0M	1	5	1 1/2	2 5/8	5	0.060	MDC	406.94
ST10005E6HYGTC0M	1	5	1 1/2	3	5 1/2	0.060	MDC	413.98
ST10005E6IUITC0M	1	5	1 1/2	3 3/8	6	0.060	MDC	426.80
ST10005E6JQITC0M	1	5	1 1/2	3 3/4	6	0.060	MDC	450.04
ST10005E6KWKTC0M	1	5	1 1/2	4 1/4	6 1/2	0.060	MDC	473.27
ST10005CSM2LTC0M	1	5	1	4 3/4	7	0.060	MDC	496.51
ST10005CSPEPTC0M	1	5	1	5 3/4	8	0.060	MDC	519.75
ST10005CSRSRTC0M	1	5	1	6 3/4	9	0.060	MDC	549.96

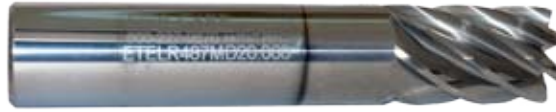
*THE RADII ON "ST" SERIES TOOLS ARE TRUNCATED AND ARE UNSUITABLE FOR FINISHING TOLERANCES



EXOTICS / STEEL SERIES 7FL

Series "XM" End Mills

FOR TITANIUM AND HIGH NICKEL ALLOYS



THE "XM" SERIES IS DESIGNED TO PROVIDE INCREASED SPEEDS WHILE FINISHING AND SEMI-ROUGHING IN EXOTICS AND HIGH NICKEL ALLOYS.

TIALN COAT	DIA	FLUTES	LOC	OAL	COATING	PRICE
XM025076W001S002	1/4	7	3/8	2	20C	23.06
XM025078I001S002	1/4	7	1/2	2	20C	25.07
XM02507BU003S002	1/4	7	3/4	2 1/2	20C	25.67
XM02507CA003S002	1/4	7	7/8	2 1/2	20C	34.15
XM02507CS003S002	1/4	7	1	2 1/2	20C	39.43
XM02507D4005S002	1/4	7	1 1/8	3	20C	41.79
XM02507DG005S002	1/4	7	1 1/4	3	20C	42.31
XM02507E6005S002	1/4	7	1 1/2	3	20C	47.57
XM02507EW009S002	1/4	7	1 3/4	4	20C	55.03
XM031277Q001S002	5/16	7	7/16	2	20C	30.22
XM03127A6001S002	5/16	7	5/8	2	20C	32.65
XM03127C2003S002	5/16	7	13/16	2 1/2	20C	33.56
XM03127CS003S002	5/16	7	1	2 1/2	20C	51.43
XM03127DU005S002	5/16	7	1 3/8	3	20C	57.00
XM03127EW007S002	5/16	7	1 3/4	3 1/2	20C	62.64
XM03127EW007S003	5/16	7	1 3/4	3 1/2	30C	62.64
XM03127FK007S002	5/16	7	2	3 1/2	20C	68.21
XM037578I001S002	3/8	7	1/2	2	20C	35.55
XM03757BU003S002	3/8	7	3/4	2 1/2	20C	37.82
XM03757CS003S002	3/8	7	1	2 1/2	20C	39.55
XM03757DG005S002	3/8	7	1 1/4	3	20C	47.90
XM03757E6007S002	3/8	7	1 1/2	3 1/2	20C	59.77
XM03757FK009S002	3/8	7	2	4	20C	77.43
XM03757G6009S002	3/8	7	2 1/4	4	20C	85.65
XM03757GS00ES002	3/8	7	2 1/2	5	20C	98.89
XM03757HC00ES002	3/8	7	2 3/4	5	20C	101.72
XM043779C003S002	7/16	7	9/16	2 1/2	20C	44.61
XM04377BU005S002	7/16	7	3/4	3	20C	48.10
XM04377CS004S002	7/16	7	1	2 3/4	20C	49.94
XM04377DG005S002	7/16	7	1 1/4	3	20C	63.72
XM04377E6009S002	7/16	7	1 1/2	4	20C	72.00
XM04377EW009S002	7/16	7	1 3/4	4	20C	75.70
XM04377FK009S002	7/16	7	2	4	20C	78.18
XM04377GG009S002	7/16	7	2 3/8	4	20C	82.15
XM04377HC009S002	7/16	7	2 3/4	4	20C	89.75



EXOTICS / STEEL SERIES 7FL

Series "XM" End Mills

FOR TITANIUM AND HIGH NICKEL ALLOYS

TIALN COAT	DIA	FLUTES	LOC	OAL	COATING	PRICE
XM05007BU005S002	1/2	7	3/4	3	20C	53.54
XM05007CS005S002	1/2	7	1	3	20C	56.98
XM05007DG005S002	1/2	7	1 1/4	3	20C	59.47
XM05007EI009S002	1/2	7	1 5/8	4	20C	68.25
XM05007FK009S002	1/2	7	2	4	20C	84.97
XM05007GG00ES002	1/2	7	2 3/8	5	20C	115.47
XM05007HC00ES002	1/2	7	2 3/4	5	20C	141.72
XM05007HY00ES002	1/2	7	3	5	20C	151.77
XM05007II00IS002	1/2	7	3 1/4	6	20C	184.51
XM05007J400IS002	1/2	7	3 1/2	6	20C	190.17
XM05627CS005S002	9/16	7	1	3	20C	77.45
XM05627E6007S002	9/16	7	1 1/2	3 1/2	20C	88.70
XM05627FK009S002	9/16	7	2	4	20C	104.19
XM05627HY00ES002	9/16	7	3	5	20C	176.85
XM06257BU005S002	5/8	7	3/4	3	20C	107.52
XM06257DG007S002	5/8	7	1 1/4	3 1/2	20C	115.20
XM06257EI007S002	5/8	7	1 5/8	3 1/2	20C	120.66
XM06257FK009S002	5/8	7	2	4	20C	128.01
XM06257H200ES002	5/8	7	2 5/8	5	20C	158.10
XM06257II00IS002	5/8	7	3 1/4	6	20C	217.86
XM06257JQ00IS002	5/8	7	3 3/4	6	20C	239.98
XM07507BU005S002	3/4	7	3/4	3	20C	122.90
XM07507CS005S002	3/4	7	1	3	20C	142.87
XM07507DG009S002	3/4	7	1 1/4	4	20C	147.92
XM07507EI009S002	3/4	7	1 5/8	4	20C	154.38
XM07507G600ES002	3/4	7	2 1/4	5	20C	204.14
XM07507HC00ES002	3/4	7	2 3/4	5	20C	219.50
XM07507II00ES002	3/4	7	3 1/4	5	20C	228.96
XM07507JQ00IS002	3/4	7	3 3/4	6	20C	292.80
XM07507KK00IS002	3/4	7	4 1/8	6	20C	314.18
XM08757FK009S002	7/8	7	2	4	20C	199.34
XM08757HY00ES002	7/8	7	3	5	20C	249.37
XM08757JQ00IS002	7/8	7	3 3/4	6	20C	325.75
XM10007DG007S002	1	7	1 1/4	3 1/2	20C	218.61
XM10007EI009S002	1	7	1 5/8	4	20C	232.68
XM10007FK00BS002	1	7	2	4 1/2	20C	244.33
XM10007H200ES002	1	7	2 5/8	5	20C	296.86
XM10007II00IS002	1	7	3 1/4	6	20C	327.64
XM10007JE00IS002	1	7	3 5/8	6	20C	394.00
XM10007KK00LS002	1	7	4 1/8	7	20C	478.28
XM10007LS00LS002	1	7	4 5/8	7	20C	499.68
XM10007NU00PS002	1	7	5 1/2	8	20C	568.63
XM12507FK00BS002	1 1/4	7	2	4 1/2	20C	479.98
XM12507HC00IS002	1 1/4	7	2 3/4	6	20C	574.28
XM12507II00IS002	1 1/4	7	3 1/4	6	20C	575.96
XM12507KA00KS002	1 1/4	7	4	6 1/2	20C	657.98
XM12507LG00NS002	1 1/4	7	4 1/2	7 1/2	20C	689.30
XM12507MM00NS002	1 1/4	7	5	7 1/2	20C	719.96
XM12507R600RS002	1 1/4	7	6 1/2	9	20C	818.90

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SWIFTCARB HIGH
PERFORMANCE CARBIDE



EXOTICS / STEEL SERIES 5FL Series "SM" End Mills FOR TITANIUM AND HIGH NICKEL ALLOYS



TIALN COAT	TICN COAT	OLD #	DIA	FL	LOC	OAL	SHANK	PRICE
SM0125558000S002	SM0125558000S003	SMS085CB	1/8	5	1/4	1 1/2	1/8	15.24
SM012558I000S002	SM012558I000S003	SMR085CB	1/8	5	1/2	1 1/2	1/8	16.76
SM01255BU001S002	SM01255BU001S003	N/A	1/8	5	3/4	2	1/8	17.98
SM0156562001S002	SM0156562001S003	SMS105CB	5/32	5	5/16	2	3/16	18.51
SM015657Q001S002	SM015657Q001S003	SMR105CB	5/32	5	7/16	2	3/16	20.25
SM0187562001S002	SM0187562001S003	SMS125CB	3/16	5	5/16	2	3/16	16.62
SM018757Q001S002	SM018757Q001S003	SMR125CB	3/16	5	7/16	2	3/16	18.51
SM018759C003S002	SM018759C003S003	N/A	3/16	5	9/16	2 1/2	3/16	20.11
SM01875BU003S002	SM01875BU003S003	N/A	3/16	5	3/4	2 1/2	3/16	21.56
SM021756W001S002	SM021756W001S003	SMS145CB	7/32	5	3/8	2	1/4	21.12
SM021758I001S002	SM021758I001S003	N/A	7/32	5	1/2	2	1/4	23.72
SM02175BU003S002	SM02175BU003S003	SMR145CB	7/32	5	3/4	2 1/2	1/4	26.52
SM025056W001S002	SM025056W001S003	SMS165CB	1/4	5	3/8	2	1/4	19.22
SM025058I001S002	SM025058I001S003	N/A	1/4	5	1/2	2	1/4	19.98
SM02505A6001S002	SM02505A6001S003	N/A	1/4	5	5/8	2	1/4	20.69
SM02505BU003S002	SM02505BU003S003	SMR165CB	1/4	5	3/4	2 1/2	1/4	21.38
SM02505CA003S002	SM02505CA003S003	N/A	1/4	5	7/8	2 1/2	1/4	26.22
SM02505CS003S002	SM02505CS003S003	SMM165CB	1/4	5	1	2 1/2	1/4	32.86
SM02505D4005S002	SM02505D4005S003	N/A	1/4	5	1 1/8	3	1/4	34.48
SM02505DG005S002	SM02505DG005S003	SML165CB	1/4	5	1 1/4	3	1/4	35.26
SM02505DU005S002	SM02505DU005S003	N/A	1/4	5	1 3/8	3	1/4	37.80
SM02505E6005S002	SM02505E6005S003	N/A	1/4	5	1 1/2	3	1/4	39.64
SM02505EW009S002	SM02505EW009S003	N/A	1/4	5	1 3/4	4	1/4	45.86
SM028157Q001S002	SM028157Q001S003	SMS185CB	9/32	5	7/16	2	5/16	27.71
SM02815C2003S002	SM02815C2003S003	SMR185CB	9/32	5	13/16	2 1/2	5/16	30.80
SM031257Q001S002	SM031257Q001S003	SMS205CB	5/16	5	7/16	2	5/16	25.19
SM031258I001S002	SM031258I001S003	N/A	5/16	5	1/2	2	5/16	26.22
SM03125A6001S002	SM03125A6001S003	N/A	5/16	5	5/8	2	5/16	27.17
SM03125C2003S002	SM03125C2003S003	SMR205CB	5/16	5	13/16	2 1/2	5/16	27.97
SM03125CS003S002	SM03125CS003S003	SMM205CB	5/16	5	1	2 1/2	5/16	42.86
SM03125DG005S002	SM03125DG005S003	SML205CB	5/16	5	1 1/4	3	5/16	44.58
SM03125E6005S002	SM03125E6005S003	N/A	5/16	5	1 1/2	3	5/16	47.50
SM03125EW007S002	SM03125EW007S003	N/A	5/16	5	1 3/4	3 1/2	5/16	52.19
SM03125FK007S002	SM03125FK007S003	N/A	5/16	5	2	3 1/2	5/16	56.84
SM03125FW009S002	SM03125FW009S003	SMX205CB	5/16	5	2 1/8	4	5/16	62.54
SM034358I001S002	SM034358I001S003	SMS225CB	11/32	5	1/2	2	3/8	32.59
SM03435BU003S002	SM03435BU003S003	N/A	11/32	5	3/4	2 1/2	3/8	34.67
SM03435CS003S002	SM03435CS003S003	SMR225CB	11/32	5	1	2 1/2	3/8	36.24
SM03435DG005S002	SM03435DG005S003	N/A	11/32	5	1 1/4	3	3/8	39.93
SM03435E6007S002	SM03435E6007S003	N/A	11/32	5	1 1/2	3 1/2	3/8	46.79
SM037558I001S002	SM037558I001S003	SMS245CB	3/8	5	1/2	2	3/8	29.63
SM03755BU003S002	SM03755BU003S003	N/A	3/8	5	3/4	2 1/2	3/8	31.73
SM03755CS003S002	SM03755CS003S003	SMR245CB	3/8	5	1	2 1/2	3/8	32.96
SM03755DG005S002	SM03755DG005S003	SMM245CB	3/8	5	1 1/4	3	3/8	39.92
SM03755E6007S002	SM03755E6007S003	SML245CB	3/8	5	1 1/2	3 1/2	3/8	49.81
SM03755FK009S002	SM03755FK009S003	N/A	3/8	5	2	4	3/8	64.52
SM03755G6009S002	SM03755G6009S003	N/A	3/8	5	2 1/4	4	3/8	71.38
SM03755GS00ES002	SM03755GS00ES003	SMX245CB	3/8	5	2 1/2	5	3/8	82.41
SM03755HC00ES002	SM03755HC00ES003	N/A	3/8	5	2 3/4	5	3/8	84.77
SM03755HY00ES002	SM03755HY00ES003	N/A	3/8	5	3	5	3/8	89.05
SM040659C003S002	SM040659C003S003	SMS265CB	13/32	5	9/16	2 1/2	7/16	40.88
SM04065BU004S002	SM04065BU004S003	N/A	13/32	5	3/4	2 3/4	7/16	44.97
SM04065CS004S002	SM04065CS004S003	SMR265CB	13/32	5	1	2 3/4	7/16	45.40
SM04065DG005S002	SM04065DG005S003	N/A	13/32	5	1 1/4	3	7/16	48.97
SM04065E6009S002	SM04065E6009S003	N/A	13/32	5	1 1/2	4	7/16	52.76
SM04065EW009S002	SM04065EW009S003	N/A	13/32	5	1 3/4	4	7/16	67.10
SM04065FK009S002	SM04065FK009S003	N/A	13/32	5	2	4	7/16	69.56
SM043759C003S002	SM043759C003S003	SMS285CB	7/16	5	9/16	2 1/2	7/16	37.18
SM04375BU005S002	SM04375BU005S003	N/A	7/16	5	3/4	3	7/16	39.98
SM04375CS004S002	SM04375CS004S003	SMR285CB	7/16	5	1	2 3/4	7/16	41.62
SM04375DG005S002	SM04375DG005S003	N/A	7/16	5	1 1/4	3	7/16	53.10
SM04375E6009S002	SM04375E6009S003	SMM285CB	7/16	5	1 1/2	4	7/16	60.00
SM04375EW009S002	SM04375EW009S003	N/A	7/16	5	1 3/4	4	7/16	62.87
SM04375FK009S002	SM04375FK009S003	SML285CB	7/16	5	2	4	7/16	65.15
SM04375G6009S002	SM04375G6009S003	N/A	7/16	5	2 1/4	4	7/16	79.54

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SWIFTCARB HIGH
PERFORMANCE CARBIDE



EXOTICS / STEEL SERIES 5FL CONTINUED

TIALN COAT	TICN COAT	OLD NUMBER	DIA	FLUTES	LOC	OAL	SHANK	PRICE
SM04685A6003S002	SM04685A6003S003	SMS305CB	15/32	5	5/8	2 1/2	1/2	49.06
SM04685CS005S002	SM04685CS005S003	N/A	15/32	5	1	3	1/2	53.07
SM04685DG005S002	SM04685DG005S003	SMR305CB	15/32	5	1 1/4	3	1/2	54.50
SM04685E6007S002	SM04685E6007S003	N/A	15/32	5	1 1/2	3 1/2	1/2	58.90
SM04685EW009S002	SM04685EW009S003	N/A	15/32	5	1 3/4	4	1/2	62.75
SM04685FK009S002	SM04685FK009S003	N/A	15/32	5	2	4	1/2	69.45
SM04685GS00ES002	SM04685GS00ES003	N/A	15/32	5	2 1/2	5	1/2	87.50
SM05005A6003S002	SM05005A6003S003	SMS325CB	1/2	5	5/8	2 1/2	1/2	44.62
SM05005CS005S002	SM05005CS005S003	N/A	1/2	5	1	3	1/2	46.87
SM05005DG005S002	SM05005DG005S003	SMR325CB	1/2	5	1 1/4	3	1/2	49.56
SM05005EI009S002	SM05005EI009S003	SMM325CB	1/2	5	1 5/8	4	1/2	56.88
SM05005EW009S002	SM05005EW009S003	N/A	1/2	5	1 3/4	4	1/2	66.82
SM05005FK009S002	SM05005FK009S003	SML325CB	1/2	5	2	4	1/2	70.81
SM05005G600ES002	SM05005G600ES003	N/A	1/2	5	2 1/4	5	1/2	89.12
SM05005GS00ES002	SM05005GS00ES003	N/A	1/2	5	2 1/2	5	1/2	96.23
SM05005HC00ES002	SM05005HC00ES003	N/A	1/2	5	2 3/4	5	1/2	118.10
SM05005HY00ES002	SM05005HY00ES003	N/A	1/2	5	3	5	1/2	126.48
SM05005I800ES002	SM05005I800ES003	SMX325CB	1/2	5	3 1/8	5	1/2	139.78
SM05005I100IS002	SM05005I100IS003	N/A	1/2	5	3 1/4	6	1/2	153.76
SM05005J400IS002	SM05005J400IS003	N/A	1/2	5	3 1/2	6	1/2	158.48
SM05005JQ00IS002	SM05005JQ00IS003	N/A	1/2	5	3 3/4	6	1/2	169.99
SM05005KA00IS002	SM05005KA00IS003	N/A	1/2	5	4	6	1/2	182.89
SM05625CS005S002	SM05625CS005S003	N/A	9/16	5	1	3	5/8	64.76
SM05625E6007S002	SM05625E6007S003	SMR365CB	9/16	5	1 1/2	3 1/2	5/8	73.92
SM05625FK009S002	SM05625FK009S003	N/A	9/16	5	2	4	5/8	86.25
SM05625HY00ES002	SM05625HY00ES003	N/A	9/16	5	3	5	5/8	144.74
SM06255BU005S002	SM06255BU005S003	SMS405CB	5/8	5	3/4	3	5/8	89.60
SM06255DG007S002	SM06255DG007S003	N/A	5/8	5	1 1/4	3 1/2	5/8	96.65
SM06255EI007S002	SM06255EI007S003	SMR405CB	5/8	5	1 5/8	3 1/2	5/8	100.09
SM06255FK009S002	SM06255FK009S003	SMM405CB	5/8	5	2	4	5/8	106.68
SM06255G6009S002	SM06255G6009S003	N/A	5/8	5	2 1/4	4	5/8	114.75
SM06255GS00ES002	SM06255GS00ES003	SML405CB	5/8	5	2 1/2	5	5/8	131.75
SM06255HY00ES002	SM06255HY00ES003	N/A	5/8	5	3	5	5/8	159.43
SM06255IU00IS002	SM06255IU00IS003	N/A	5/8	5	3 3/8	6	5/8	181.55
SM06255JQ00IS002	SM06255JQ00IS003	N/A	5/8	5	3 3/4	6	5/8	199.99
SM06255KA00IS002	SM06255KA00IS003	SMX405CB	5/8	5	4	6	5/8	210.05
SM06255LS00LS002	SM06255LS00LS003	N/A	5/8	5	4 5/8	7	5/8	229.10
SM07505BU005S002	SM07505BU005S003	N/A	3/4	5	3/4	3	3/4	99.99
SM07505CS005S002	SM07505CS005S003	SMS485CB	3/4	5	1	3	3/4	119.06
SM07505DG009S002	SM07505DG009S003	N/A	3/4	5	1 1/4	4	3/4	124.79
SM07505EI009S002	SM07505EI009S003	SMR485CB	3/4	5	1 5/8	4	3/4	128.65
SM07505F8009S002	SM07505F8009S003	N/A	3/4	5	1 7/8	4	3/4	147.87
SM07505G600ES002	SM07505G600ES003	SMM485CB	3/4	5	2 1/4	5	3/4	170.12
SM07505GS00ES002	SM07505GS00ES003	N/A	3/4	5	2 1/2	5	3/4	178.25
SM07505HM00ES002	SM07505HM00ES003	N/A	3/4	5	2 7/8	5	3/4	186.58
SM07505I100ES002	SM07505I100ES003	SML485CB	3/4	5	3 1/4	5	3/4	190.83
SM07505J400IS002	SM07505J400IS003	N/A	3/4	5	3 1/2	6	3/4	229.34
SM07505KA00IS002	SM07505KA00IS003	SMX485CB	3/4	5	4	6	3/4	261.82
SM07505L600KS002	SM07505L600KS003	N/A	3/4	5	4 3/8	6 1/2	3/4	284.75
SM07505M200LS002	SM07505M200LS003	N/A	3/4	5	4 3/4	7	3/4	299.99
SM08755FK009S002	SM08755FK009S003	SMR565CB	7/8	5	2	4	7/8	166.12
SM08755HY00ES002	SM08755HY00ES003	N/A	7/8	5	3	5	7/8	212.68
SM08755JQ00IS002	SM08755JQ00IS003	N/A	7/8	5	3 3/4	6	7/8	287.17
SM10005DG007S002	SM10005DG007S003	SMS645CB	1	5	1 1/4	3 1/2	1	182.18
SM10005E6009S002	SM10005E6009S003	N/A	1	5	1 1/2	4	1	194.23
SM10005FK00BS002	SM10005FK00BS003	SMR645CB	1	5	2	4 1/2	1	203.61
SM10005GG00ES002	SM10005GG00ES003	N/A	1	5	2 3/8	5	1	225.42
SM10005HC00IS002	SM10005HC00IS003	SMM645CB	1	5	2 3/4	6	1	248.26
SM10005I100IS002	SM10005I100IS003	SML645CB	1	5	3 1/4	6	1	273.04
SM10005JE00IS002	SM10005JE00IS003	N/A	1	5	3 5/8	6	1	338.18
SM10005KK00LS002	SM10005KK00LS003	SMX645CB	1	5	4 1/8	7	1	398.57
SM10005LS00LS002	SM10005LS00LS003	N/A	1	5	4 5/8	7	1	419.22
SM10005MY00PS002	SM10005MY00PS003	N/A	1	5	5 1/8	8	1	449.64
SM10005P400PS002	SM10005P400PS003	N/A	1	5	5 5/8	8	1	472.62
SM12505FK00BS002	SM12505FK00BS003	SMR805CB	1 1/4	5	2	4 1/2	1 1/4	399.99
SM12505HC00IS002	SM12505HC00IS003	SMM805CB	1 1/4	5	2 3/4	6	1 1/4	478.57
SM12505I100IS002	SM12505I100IS003	SML805CB	1 1/4	5	3 1/4	6	1 1/4	479.97
SM12505KA00NS002	SM12505KA00NS003	N/A	1 1/4	5	4	7 1/2	1 1/4	548.41
SM12505LG00NS002	SM12505LG00NS003	N/A	1 1/4	5	4 1/2	7 1/2	1 1/4	572.20
SM12505MM00NS002	SM12505MM00NS003	SMX805CB	1 1/4	5	5	7 1/2	1 1/4	599.97
SM12505Q000RS002	SM12505Q000RS003	N/A	1 1/4	5	6	9	1 1/4	675.00

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SWIFTCARB HIGH PERFORMANCE CARBIDE



STAINLESS/ ALLOY FINISHING SERIES 6FL

Series "SF" End Mills

FOR FINISHING STAINLESS/ALLOY STEELS AND EXOTICS



- Stocked in: (20C) AlTiN, (30C) TiCN
- Best For Good Finish
- Stub, Regular, & Medium Lengths
- High Accuracy with close tolerances

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SWIFTCARB HIGH
PERFORMANCE CARBIDE



20C / TIALN COAT	30C / TICN COAT	OLD #	DIA	FLUTES	LOC	OAL	PRICE
SF025066W001S002	SF025066W001S003	SFS166CB	1/4	6	3/8	2	19.22
SF02506BU003S002	SF02506BU003S003	SFR166CB	1/4	6	3/4	2 1/2	21.38
SF02506CS003S002	SF02506CS003S003	SFM166CB	1/4	6	1	2 1/2	32.86
SF031267Q001S002	SF031267Q001S003	SFS206CB	5/16	6	7/16	2	25.19
SF03126C2003S002	SF03126C2003S003	SFR206CB	5/16	6	13/16	2 1/2	27.97
SF03126CS003S002	SF03126CS003S003	SFM206CB	5/16	6	1	2 1/2	42.86
SF037568I001S002	SF037568I001S003	SFS246CB	3/8	6	1/2	2	29.63
SF03756CS003S002	SF03756CS003S003	SFR246CB	3/8	6	1	2 1/2	32.90
SF03756DG007S002	SF03756DG007S003	SFM246CB	3/8	6	1 1/4	3 1/2	39.91
SF043769C003S002	SF043769C003S003	SFS286CB	7/16	6	9/16	2 1/2	37.19
SF04376CS004S002	SF04376CS004S003	SFR286CB	7/16	6	1	2 3/4	41.61
SF04376E6007S002	SF04376E6007S003	SFM286CB	7/16	6	1 1/2	3 1/2	60.00
SF05006A6003S002	SF05006A6003S003	SFS326CB	1/2	6	5/8	2 1/2	44.62
SF05006DG005S002	SF05006DG005S003	SFR326CB	1/2	6	1 1/4	3	49.56
SF05006EI009S002	SF05006EI009S003	SFM326CB	1/2	6	1 5/8	4	56.87
SF06256BU005S002	SF06256BU005S003	SFS406CB	5/8	6	3/4	3	89.60
SF06256EI007S002	SF06256EI007S003	SFR406CB	5/8	6	1 5/8	3 1/2	100.09
SF06256FK009S002	SF06256FK009S003	SFM406CB	5/8	6	2	4	106.69
SF07506CS005S002	SF07506CS005S003	SFS486CB	3/4	6	1	3	119.06
SF07506EI009S002	SF07506EI009S003	SFR486CB	3/4	6	1 5/8	4	128.65
SF07506G600ES002	SF07506G600ES003	SFM486CB	3/4	6	2 1/4	5	166.12
SF10006DG007S002	SF10006DG007S003	SFS646CB	1	6	1 1/4	3 1/2	182.18
SF10006FK00BS002	SF10006FK00BS003	SFR646CB	1	6	2	4 1/2	203.61
SF10006HC00IS002	SF10006HC00IS003	SFM646CB	1	6	2 3/4	6	248.26
SF12506FK00BS002	SF12506FK00BS003	SFR806CB	1 1/4	6	2	4 1/2	399.99
SF12506HC00IS002	SF12506HC00IS003	SFM806CB	1 1/4	6	2 3/4	6	478.57



3FL STAINLESS/ ALLOY POCKETING MILL Series "SS" End Mills FOR POCKETING STAINLESS/ALLOY STEELS AND EXOTICS



ESPECIALLY DESIGNED FOR MACHINING
SLOTS AND POCKETS IN TOUGH ALLOYS

- Stocked in: (20C) AlTiN, or (30C) TiCN
- Small corner radius adds strength to the corner
- Aggressive machining of Stainless Steel
- Excellent results machining Waspalloy and Inconel

20C / TIALN COAT	30C / TiCN COAT	OLD #	DIA	FLUTES	LOC	OAL	RADIUS	SHANK	PRICE
SS0125358000F002	SS0125358000F003	SSS083CB	1/8	3	1/4	1 1/2	0.008	1/8	14.93
SS012538I000F002	SS012538I000F003	SSR083CB	1/8	3	1/2	1 1/2	0.008	1/8	16.55
SS0156362001F002	SS0156362001F003	SSS103CB	5/32	3	5/16	2	0.008	3/16	18.69
SS015639C001F002	SS015639C001F003	SSR103CB	5/32	3	9/16	2	0.008	3/16	20.50
SS0187362001F002	SS0187362001F003	SSS123CB	3/16	3	5/16	2	0.008	3/16	16.78
SS018739C001F002	SS018739C001F003	SSR123CB	3/16	3	9/16	2	0.008	3/16	18.74
SS021836W001R302	SS021836W001R303	SSS143CB	7/32	3	3/8	2	0.015	1/4	21.33
SS02183BU003R302	SS02183BU003R303	SSR143CB	7/32	3	3/4	2 1/2	0.015	1/4	26.07
SS025036W001R302	SS025036W001R303	SSS163CB	1/4	3	3/8	2	0.015	1/4	19.28
SS02503BU003R302	SS02503BU003R303	SSR163CB	1/4	3	3/4	2 1/2	0.015	1/4	21.14
SS028137Q001R302	SS028137Q001R303	SSS183CB	9/32	3	7/16	2	0.015	5/16	27.11
SS02813C2003R302	SS02813C2003R303	SSR183CB	9/32	3	13/16	2 1/2	0.015	5/16	29.80
SS031237Q001R302	SS031237Q001R303	SSS203CB	5/16	3	7/16	2	0.015	5/16	24.53
SS03123C2003R302	SS03123C2003R303	SSR203CB	5/16	3	13/16	2 1/2	0.015	5/16	27.42
SS034338I001R302	SS034338I001R303	SSS223CB	11/32	3	1/2	2	0.015	3/8	32.70
SS03433CS003R302	SS03433CS003R303	SSR223CB	11/32	3	1	2 1/2	0.015	3/8	36.43
SS037538I001R302	SS037538I001R303	SSS243CB	3/8	3	1/2	2	0.015	3/8	29.62
SS03753CS003R302	SS03753CS003R303	SSR243CB	3/8	3	1	2 1/2	0.015	3/8	32.88
SS043739C003R302	SS043739C003R303	SSS283CB	7/16	3	9/16	2 1/2	0.015	7/16	37.13
SS04373CS004R302	SS04373CS004R303	SSR283CB	7/16	3	1	2 3/4	0.015	7/16	40.83
SS05003A6003R602	SS05003A6003R603	SSS323CB	1/2	3	5/8	2 1/2	0.030	1/2	45.95
SS05003DG005R602	SS05003DG005R603	SSR323CB	1/2	3	1 1/4	3	0.030	1/2	50.42
SS06253BU005R602	SS06253BU005R603	SSS403CB	5/8	3	3/4	3	0.030	5/8	90.34
SS06253EI007R602	SS06253EI007R603	SSR403CB	5/8	3	1 5/8	3 1/2	0.030	5/8	99.02
SS07503CS005R602	SS07503CS005R603	SSS483CB	3/4	3	1	3	0.030	3/4	122.86
SS07503EI009R602	SS07503EI009R603	SSR483CB	3/4	3	1 5/8	4	0.030	3/4	134.95
SS10003DG005R602	SS10003DG005R603	SSS643CB	1	3	1 1/4	3	0.030	1	199.03
SS10003FK00BR602	SS10003FK00BR603	SSR643CB	1	3	2	4 1/2	0.030	1	220.08



ALUMINUM RAMP AND RUN SERIES 3FL Series "AT" End Mills FOR HEAVY RAMPING AND POCKETING

TRUeMill[®] CERTIFIED END MILLS



PATENT PENDING

Our Ramp & Run Series end mills, are designed to ramp at angles that were previously unattainable, and run at high speeds on the floor, drastically reducing cycle times and minimizing tool changes.

- Reduce Cycle times by 30-600%
- 2X-4X Longer Tool Life
- Ramp angles up to 15°
- Mill Holes Faster Than Drilling In Many Applications

**AVAILABLE WITH
COOLANT HOLE**

NEW NUMBER	OLD #	DIA	FLUTES	LOC	OAL	*RAD	PRICE	COOLANT THOUGH	PRICE
AT018734E001T300	ATS123CB015R	3/16	3	3/16	2	0.015	28.20	N/A	
AT018735M001T300	ATR123CB015R	3/16	3	9/32	2	0.015	29.43	N/A	
AT018736W001T300	ATM123CB015R	3/16	3	3/8	2	0.015	31.06	N/A	
AT0250358001T600	ATS163CB030R	1/4	3	1/4	2	0.030	29.98	AT025038I001T6C0	43.73
AT025036W001T600	ATR163CB030R	1/4	3	3/8	2	0.030	30.54	AT025036W001T6C0	44.29
AT025038I001T600	ATM163CB030R	1/4	3	1/2	2	0.030	32.86	AT0250358001T6C0	46.61
AT0312362001T600	ATS203CB030R	5/16	3	5/16	2	0.030	33.10	AT03123A6003T6C0	48.83
AT0312384001T600	ATR203CB030R	5/16	3	15/32	2	0.030	35.76	AT031237Q001T6C0	51.49
AT03123A6003T600	ATM203CB030R	5/16	3	5/8	2 1/2	0.030	38.99	AT0312362001T6C0	54.72
AT037536W001T600	ATS243CB030R	3/8	3	3/8	2	0.030	38.74	AT03753BU003T6C0	56.06
AT037539C003T600	ATR243CB030R	3/8	3	9/16	2 1/2	0.030	42.18	AT037539C003T6C0	59.50
AT03753BU003T600	ATM243CB030R	3/8	3	3/4	2 1/2	0.030	47.53	AT037536W001T6C0	64.85
AT043737Q004TC00	ATS283CB060R	7/16	3	7/16	2 3/4	0.060	47.35	AT04373CA005T6C0	65.41
AT04373AK004TC00	ATR283CB060R	7/16	3	21/32	2 3/4	0.060	49.87	AT04373AK004T6C0	67.93
AT04373CA005TC00	ATM283CB030R	7/16	3	7/8	3	0.060	58.80	AT043737Q004T6C0	76.86
AT050038I003TC00	ATS323CB060R	1/2	3	1/2	2 1/2	0.060	59.98	AT05003CS005TCC0	81.56
AT05003BU005TC00	ATR323CB060R	1/2	3	3/4	3	0.060	64.82	AT05003BU005TCC0	86.40
AT05003CS005TC00	ATM323CB060R	1/2	3	1	3	0.060	68.18	AT050038I003TCC0	89.76
AT06253A6005TC00	ATS403CB060R	5/8	3	5/8	3	0.060	98.78	AT06253DG007TCC0	121.64
AT06253CI005TC00	ATR403CB060R	5/8	3	8/9	3	0.060	105.19	AT06253CI005TCC0	128.05
AT06253DG007TC00	ATM403CB060R	5/8	3	1 1/4	3 1/2	0.060	113.25	AT06253A6005TCC0	136.11
AT07503BU005TC00	ATS483CB060R	3/4	3	3/4	3	0.060	137.20	AT07503E6009TCC0	154.10
AT07503D4005TC00	ATR483CB060R	3/4	3	1 1/8	3	0.060	146.56	AT07503D4007TCC0	172.31
AT07503E6009TC00	ATM483CB060R	3/4	3	1 1/2	4	0.060	153.77	AT07503BU005TCC0	179.52
AT08753CA009TC00	ATS563CB060R	7/8	3	7/8	4	0.060	184.67	AT08753EW009TCC0	208.46
AT08753DM009TC00	ATR563CB060R	7/8	3	1 1/3	4	0.060	196.39	AT08753DA009TCC0	220.18
AT08753EW009TC00	ATM563CB060R	7/8	3	1 3/4	4	0.060	214.21	AT08753CA009TCC0	238.00
AT10003CS009TC00	ATS643CB060R	1	3	1	4	0.060	229.87	AT10003FK00ETCC0	257.01
AT10003E6009TC00	ATR643CB060R	1	3	1 1/2	4	0.060	246.24	AT10003E6009TCC0	273.38
AT10003FK00BTC00	ATM643CB060R	1	3	2	4 1/2	0.060	262.18	AT10003CS009TCC0	289.32

*THE RADII ON "AT" SERIES TOOLS ARE TRUNCATED AND ARE UNSUITABLE FOR FINISHING TOLERANCES

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HIGH PERFORMANCE
CARBIDE TOOLS



XL ALUMINUM RAMP AND RUN SERIES 3FL

Series "ATEL" End Mills

FOR LONG REACH HEAVY RAMPING AND POCKETING

TRUeMill[®] CERTIFIED END MILLS



PATENT PENDING

NEW NUMBER	DIA	FLUTES	LOC	LBS	OAL	*RADIUS	PRICE
AT037539CBU3T600	3/8	3	9/16	3/4	2 1/2	0.030	58.37
AT037539CCS3T600	3/8	3	9/16	1	2 1/2	0.030	60.35
AT037539CE65T600	3/8	3	9/16	1 1/2	3	0.030	62.33
AT037539CFK7T600	3/8	3	9/16	2	3 1/2	0.030	64.31
AT037536WGS9T600	3/8	3	3/8	2 1/2	4	0.030	90.64
AT037536WHYBT600	3/8	3	3/8	3	4 1/2	0.030	98.67
AT037536WJ4ET600	3/8	3	3/8	3 1/2	5	0.030	125.58
AT037536WKAGT600	3/8	3	3/8	4	5 1/2	0.030	158.25
AT05003BUE67TC00	1/2	3	3/4	1 1/2	3 1/2	0.060	75.81
AT05003BUFK9TC00	1/2	3	3/4	2	4	0.060	85.40
AT05003BUGSBTC00	1/2	3	3/4	2 1/2	4 1/2	0.060	94.97
AT050038IHETC00	1/2	3	1/2	3	5	0.060	104.56
AT050038IJ4GTC00	1/2	3	1/2	3 1/2	5 1/2	0.060	114.12
AT050038IKAITC00	1/2	3	1/2	4	6	0.060	123.71
AT050038ILGKTC00	1/2	3	1/2	4 1/2	6 1/2	0.060	133.29
AT050038IMMLTC00	1/2	3	1/2	5	7	0.060	168.25
AT06253CIE67TC00	5/8	3	15/16	1 1/2	3 1/2	0.060	145.39
AT06253CIFK9TC00	5/8	3	15/16	2	4	0.060	152.73
AT06253CIGSBTC00	5/8	3	15/16	2 1/2	4 1/2	0.060	160.09
AT06253CIHYETC00	5/8	3	15/16	3	5	0.060	167.44
AT06253CIJ4GTC00	5/8	3	15/16	3 1/2	5 1/2	0.060	178.02
AT06253A6KAITC00	5/8	3	5/8	4	6	0.060	199.16
AT06253A6LGKTC00	5/8	3	5/8	4 1/2	6 1/2	0.060	220.30
AT06253A6MMLTC00	5/8	3	5/8	5	7	0.060	236.70
AT06253A6NUNTC00	5/8	3	5/8	5 1/2	7 1/2	0.060	253.09
AT06253A6Q0PTC00	5/8	3	5/8	6	8	0.060	269.49
AT07503D4FK9TC00	3/4	3	1 1/8	2	4	0.060	200.07
AT07503D4GSBTC00	3/4	3	1 1/8	2 1/2	4 1/2	0.060	210.97
AT07503D4HYETC00	3/4	3	1 1/8	3	5	0.060	219.51
AT07503D4J4GTC00	3/4	3	1 1/8	3 1/2	5 1/2	0.060	242.61
AT07503D4KAITC00	3/4	3	1 1/8	4	6	0.060	259.63
AT07503BULGKTC00	3/4	3	3/4	4 1/2	6 1/2	0.060	267.71
AT07503BUMMLTC00	3/4	3	3/4	5	7	0.060	275.94
AT07503BUNUNTC00	3/4	3	3/4	5 1/2	7 1/2	0.060	305.77
AT07503BUQ0PTC00	3/4	3	3/4	6	8	0.060	335.96
AT07503BUR6QTC00	3/4	3	3/4	6 1/2	8 1/2	0.060	366.14
AT07503BUSCRTC00	3/4	3	3/4	7	9	0.060	396.33
AT07503BUTITTC00	3/4	3	3/4	7 1/2	10	0.060	426.51
AT10003E6GSETC00	1	3	1 1/2	2 1/2	5	0.060	355.44
AT10003E6HYGTC00	1	3	1 1/2	3	5 1/2	0.060	366.24
AT10003E6J4ITC00	1	3	1 1/2	3 1/2	6	0.060	372.58
AT10003E6KAKTC00	1	3	1 1/2	4	6 1/2	0.060	384.12
AT10003E6LGLTC00	1	3	1 1/2	4 1/2	7	0.060	405.03
AT10003E6MMNTC00	1	3	1 1/2	5	7 1/2	0.060	425.94
AT10003E6NUPTC00	1	3	1 1/2	5 1/2	8	0.060	446.85
AT10003E6Q0QTC00	1	3	1 1/2	6	8 1/2	0.060	467.77
AT10003E6R6RTC00	1	3	1 1/2	6 1/2	9	0.060	494.96
AT10003E6SCSTC00	1	3	1 1/2	7	9 1/2	0.060	522.15
AT10003E6TITTC00	1	3	1 1/2	7 1/2	10	0.060	549.34

*THE RADII ON "AT" SERIES TOOLS ARE TRUNCATED AND ARE UNSUITABLE FOR FINISHING TOLERANCES



ALUMINUM FINISHER 5FL

Series "AF5" End Mills

FOR ULTRA FAST FINISHING IN ALUMINUM



FOR MIRROR FINISHES AT ULTRA FAST SPEEDS ON LIGHT PERIPHERY MILLING APPLICATIONS

NEW NUMBER	DIA	#FL	LOC	OAL	PRICE
AF025056W001S100	1/4	5	3/8	2	35.67
AF025058I001S100	1/4	5	1/2	2	37.77
AF02505BU003S100	1/4	5	3/4	2 1/2	40.92
AF02505CS005S100	1/4	5	1	3	54.57
AF02505DG005S100	1/4	5	1 1/4	3	62.95
AF02505E6005S100	1/4	5	1 1/2	3	66.12
AF02505EW007S100	1/4	5	1 3/4	3 1/2	68.22
AF02505FK007S100	1/4	5	2	3 1/2	71.37
AF031258I001S100	5/16	5	1/2	2	38.82
AF03125BU003S100	5/16	5	3/4	2 1/2	45.12
AF03125CS003S100	5/16	5	1	2 1/2	51.42
AF03125DG005S100	5/16	5	1 1/4	3	58.77
AF03125E6005S100	5/16	5	1 1/2	3	65.07
AF03125EW007S100	5/16	5	1 3/4	3 1/2	72.42
AF03125FK007S100	5/16	5	2	3 1/2	75.57
AF037558I001S100	3/8	5	1/2	2	41.97
AF03755BU003S100	3/8	5	3/4	2 1/2	54.57
AF03755CS003S100	3/8	5	1	2 1/2	61.92
AF03755DG005S100	3/8	5	1 1/4	3	73.47
AF03755E6007S100	3/8	5	1 1/2	3 1/2	78.72
AF03755EW007S100	3/8	5	1 3/4	3 1/2	81.87
AF03755FK009S100	3/8	5	2	4	86.07
AF03755G6009S100	3/8	5	2 1/4	4	90.27
AF03755GS00ES100	3/8	5	2 1/2	5	93.42
AF03755HY00ES100	3/8	5	3	5	104.97
AF04375BU004S100	7/16	5	3/4	2 3/4	60.87
AF04375CS004S100	7/16	5	1	2 3/4	68.22
AF04375DG005S100	7/16	5	1 1/4	3	80.82
AF04375EW009S100	7/16	5	1 3/4	4	87.12
AF04375FK009S100	7/16	5	2	4	91.32
AF04375GS00ES100	7/16	5	2 1/2	5	100.77
AF04375HY00ES100	7/16	5	3	5	115.47
AF05005A6003S100	1/2	5	5/8	2 1/2	62.97
AF05005CS005S100	1/2	5	1	3	68.22
AF05005DG005S100	1/2	5	1 1/4	3	73.47
AF05005E6007S100	1/2	5	1 1/2	3 1/2	82.92
AF05005E1007S100	1/2	5	1 5/8	3 1/2	92.37
AF05005EW009S100	1/2	5	1 3/4	4	98.67
AF05005FK009S100	1/2	5	2	4	104.97
AF05005G600ES100	1/2	5	2 1/4	5	118.62
AF05005GS00ES100	1/2	5	2 1/2	5	131.22
AF05005HC00ES100	1/2	5	2 3/4	5	145.92
AF05005HY00ES100	1/2	5	3	5	152.22
AF05005I800ES100	1/2	5	3 1/8	5	157.47
AF05005I100IS100	1/2	5	3 1/4	6	173.22
AF05005J500IS100	1/2	5	3 1/2	6	184.77
AF05005KA00IS100	1/2	5	4	6	209.97

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HIGH PERFORMANCE
CARBIDE TOOLS



ALUMINUM FINISHER 5FL CONTINUED

Series "AF5" End Mills
FOR ULTRA FAST FINISHING IN ALUMINUM

NEW NUMBER	DIA	#FL	LOC	OAL	PRICE
AF05625E6007S100	9/16	5	1 1/2	3 1/2	104.97
AF05625FK009S100	9/16	5	2	4	125.97
AF05625HY00ES100	9/16	5	3	5	178.47
AF06255BU005S100	5/8	5	3/4	3	115.47
AF06255DG007S100	5/8	5	1 1/4	3 1/2	121.77
AF06255EI007S100	5/8	5	1 5/8	3 1/2	125.97
AF06255F8009S100	5/8	5	1 7/8	4	145.92
AF06255FK009S100	5/8	5	2	4	155.37
AF06255G600ES100	5/8	5	2 1/4	5	174.27
AF06255GS00ES100	5/8	5	2 1/2	5	194.22
AF06255HC00ES100	5/8	5	2 3/4	5	204.72
AF06255II00IS100	5/8	5	3 1/4	6	234.12
AF06255JQ00IS100	5/8	5	3 3/4	6	246.72
AF06255LG00LS100	5/8	5	4 1/2	7	283.47
AF07505BU005S100	3/4	5	3/4	3	146.97
AF07505CS005S100	3/4	5	1	3	157.47
AF07505EI009S100	3/4	5	1 5/8	4	177.42
AF07505G600ES100	3/4	5	2 1/4	5	220.47
AF07505GS00ES100	3/4	5	2 1/2	5	230.97
AF07505II00IS100	3/4	5	3 1/4	6	262.47
AF07505J400IS100	3/4	5	3 1/2	6	287.67
AF07505KA00KS100	3/4	5	4	6 1/2	335.97
AF07505LS00LS100	3/4	5	4 5/8	7	367.47
AF08755EI009S100	7/8	5	1 5/8	4	230.97
AF08755HC00ES100	7/8	5	2 3/4	5	304.47
AF08755JQ00IS100	7/8	5	3 3/4	6	356.97
AF08755MM00PS100	7/8	5	5	8	440.97
AF10005CS005S100	1	5	1	3	261.42
AF10005DG009S100	1	5	1 1/4	4	269.82
AF10005E6009S100	1	5	1 1/2	4	280.32
AF10005FK00BS100	1	5	2	4 1/2	288.72
AF10005H200ES100	1	5	2 5/8	5	311.82
AF10005HY00IS100	1	5	3	6	335.97
AF10005II00IS100	1	5	3 1/4	6	351.72
AF10005J400IS100	1	5	3 1/2	6	409.47
AF10005KK00LS100	1	5	4 1/8	7	493.47
AF10005LG00LS100	1	5	4 1/2	7	524.97
AF10005N800PS100	1	5	5 1/4	8	577.47
AF12505FK00BS100	1 1/4	5	2	4 1/2	472.47
AF12505H200GS100	1 1/4	5	2 5/8	5 1/2	524.97
AF12505II00IS100	1 1/4	5	3 1/4	6	577.47
AF12505KW00NS100	1 1/4	5	4 1/4	7 1/2	787.47
AF12505MM00NS100	1 1/4	5	5	7 1/2	803.22
AF12505NU00RS100	1 1/4	5	5 1/2	9	839.97



VARIABLE PITCH/ HELIX ALUMINUM FINISHER 4FL Series "AF" End Mills FOR ULTRA FAST FINISHING IN ALUMINUM



FOR MIRROR FINISHES AT ULTRA FAST SPEEDS ON
MEDIUM-HEAVY PERIPHERY MILLING APPLICATIONS

NEW NUMBER	OLD #	DIA	#FL	LOC	OAL	PRICE
AF025046W001S100	AFS164CB	1/4	4	3/8	2	33.98
AF025048I001S100	N/A	1/4	4	1/2	2	35.98
AF02504BU003S100	AFR164CB	1/4	4	3/4	2 1/2	38.98
AF02504CS005S100	AFM164CB	1/4	4	1	3	51.98
AF02504DG005S100	AFL164CB	1/4	4	1 1/4	3	59.96
AF02504E6005S100	N/A	1/4	4	1 1/2	3	62.98
AF02504EW007S100	N/A	1/4	4	1 3/4	3 1/2	64.98
AF02504FK007S100	N/A	1/4	4	2	3 1/2	67.98
AF031248I001S100	N/A	5/16	4	1/2	2	36.98
AF03124BU003S100	N/A	5/16	4	3/4	2 1/2	42.98
AF03124CS003S100	AFR204CB	5/16	4	1	2 1/2	48.98
AF03124DG005S100	N/A	5/16	4	1 1/4	3	55.98
AF03124E6005S100	N/A	5/16	4	1 1/2	3	61.98
AF03124EW007S100	N/A	5/16	4	1 3/4	3 1/2	68.98
AF03124FK007S100	N/A	5/16	4	2	3 1/2	71.98
AF037548I001S100	AFS244CB	3/8	4	1/2	2	39.98
AF03754BU003S100	N/A	3/8	4	3/4	2 1/2	51.98
AF03754CS003S100	AFR244CB	3/8	4	1	2 1/2	58.98
AF03754DG005S100	AFM244CB	3/8	4	1 1/4	3	69.98
AF03754E6007S100	AFL244CB	3/8	4	1 1/2	3 1/2	74.98
AF03754EW007S100	N/A	3/8	4	1 3/4	3 1/2	77.98
AF03754FK009S100	N/A	3/8	4	2	4	81.98
AF03754G6009S100	N/A	3/8	4	2 1/4	4	85.98
AF03754GS00ES100	AFX244CB	3/8	4	2 1/2	5	88.98
AF03754HY00ES100	N/A	3/8	4	3	5	99.98
AF04374BU004S100	N/A	7/16	4	3/4	2 3/4	57.98
AF04374CS004S100	AFR284CB	7/16	4	1	2 3/4	64.98
AF04374DG005S100	N/A	7/16	4	1 1/4	3	76.98
AF04374EW009S100	N/A	7/16	4	1 3/4	4	82.98
AF04374FK009S100	N/A	7/16	4	2	4	86.98
AF04374GS00ES100	N/A	7/16	4	2 1/2	5	95.98
AF04374HY00ES100	N/A	7/16	4	3	5	109.98
AF05004A6003S100	AFS324CB	1/2	4	5/8	2 1/2	59.98
AF05004CS005S100	N/A	1/2	4	1	3	64.98
AF05004DG005S100	AFR324CB	1/2	4	1 1/4	3	69.98
AF05004E6007S100	N/A	1/2	4	1 1/2	3 1/2	78.98
AF05004EI007S100	AFM324CB	1/2	4	1 5/8	3 1/2	87.98
AF05004EW009S100	N/A	1/2	4	1 3/4	4	93.98
AF05004FK009S100	AFL324CB	1/2	4	2	4	99.98
AF05004G600ES100	N/A	1/2	4	2 1/4	5	112.98
AF05004GS00ES100	N/A	1/2	4	2 1/2	5	124.98
AF05004HC00ES100	N/A	1/2	4	2 3/4	5	138.98
AF05004HY00ES100	N/A	1/2	4	3	5	144.98
AF05004I800ES100	AFX324CB	1/2	4	3 1/8	5	149.98
AF05004I100IS100	N/A	1/2	4	3 1/4	6	164.98
AF05004J400IS100	N/A	1/2	4	3 1/2	6	175.98
AF05004KA00IS100	N/A	1/2	4	4	6	199.98
AF05624E6007S100	N/A	9/16	4	1 1/2	3 1/2	99.98
AF05624FK009S100	N/A	9/16	4	2	4	119.98
AF05624HY00ES100	N/A	9/16	4	3	5	169.98



VARIABLE PITCH/ HELIX ALUMINUM FINISHER 4FL Series "AF" End Mills FOR ULTRA FAST FINISHING IN ALUMINUM

NEW NUMBER	OLD #	DIA	#FL	LOC	OAL	PRICE
AF06254BU005S100	AFS404CB	5/8	4	3/4	3	109.98
AF06254DG007S100	N/A	5/8	4	1 1/4	3 1/2	115.98
AF06254EI007S100	AFR404CB	5/8	4	1 5/8	3 1/2	119.98
AF06254F8009S100	N/A	5/8	4	1 7/8	4	138.98
AF06254FK009S100	AFM404CB	5/8	4	2	4	147.98
AF06254G600ES100	N/A	5/8	4	2 1/4	5	165.98
AF06254GS00ES100	AFL404CB	5/8	4	2 1/2	5	184.98
AF06254HC00ES100	N/A	5/8	4	2 3/4	5	194.98
AF06254II00IS100	N/A	5/8	4	3 1/4	6	222.98
AF06254JQ00IS100	AFX404CB	5/8	4	3 3/4	6	234.98
AF06254LG00LS100	N/A	5/8	4	4 1/2	7	269.98
AF07504BU005S100	AFS484CB	3/4	4	3/4	3	139.98
AF07504CS005S100	N/A	3/4	4	1	3	149.98
AF07504EI009S100	AFR484CB	3/4	4	1 5/8	4	168.98
AF07504G600ES100	AFM484CB	3/4	4	2 1/4	5	209.98
AF07504GS00ES100	N/A	3/4	4	2 1/2	5	219.98
AF07504II00IS100	AFL484CB	3/4	4	3 1/4	6	249.98
AF07504J400IS100	N/A	3/4	4	3 1/2	6	273.98
AF07504KA00KS100	AFX484CB	3/4	4	4	6 1/2	319.98
AF07504LS00LS100	N/A	3/4	4	4 5/8	7	349.98
AF08754EI009S100	AFR564CB	7/8	4	1 5/8	4	219.98
AF08754HC00ES100	N/A	7/8	4	2 3/4	5	289.98
AF08754JQ00IS100	N/A	7/8	4	3 3/4	6	339.98
AF08754MM00PS100	N/A	7/8	4	5	8	419.98
AF10004CS005S100	AFS644CB	1	4	1	3	248.98
AF10004DG009S100	N/A	1	4	1 1/4	4	256.98
AF10004E6009S100	N/A	1	4	1 1/2	4	266.98
AF10004FK00BS100	AFR644CB	1	4	2	4 1/2	274.98
AF10004H200ES100	AFM644CB	1	4	2 5/8	5	296.98
AF10004HY00IS100	N/A	1	4	3	6	319.98
AF10004II00IS100	AFL644CB	1	4	3 1/4	6	334.98
AF10004J400IS100	N/A	1	4	3 1/2	6	389.98
AF10004KK00LS100	AFX644CB	1	4	4 1/8	7	469.98
AF10004LG00LS100	N/A	1	4	4 1/2	7	499.98
AF10004N800PS100	N/A	1	4	5 1/4	8	549.98
AF12504FK00BS100	AFR804CB	1 1/4	4	2	4 1/2	449.98
AF12504H200GS100	AFM804CB	1 1/4	4	2 5/8	5 1/2	499.98
AF12504II00IS100	AFL804CB	1 1/4	4	3 1/4	6	549.98
AF12504KW00NS100	AFX804CB	1 1/4	4	4 1/4	7 1/2	749.98
AF12504MM00NS100	N/A	1 1/4	4	5	7 1/2	764.98
AF12504NU00RS100	N/A	1 1/4	4	5 1/2	9	799.98



ALUMINUM HEAVY ROUGHER 3FL

Series "AR" End Mills

FOR HEAVY ROUGHING OF ALUMINUM



NEW NUMBER	CODE	DIA	FLUTES	LOC	OAL	PRICE
AR025036W001S100	ARS163CB	1/4	3	3/8	2	30.54
AR025038I001S100	N/A	1/4	3	1/2	2	32.86
AR02503BU003S100	ARR163CB	1/4	3	3/4	2 1/2	34.76
AR02503CS005S100	ARM163CB	1/4	3	1	3	44.27
AR02503DG005S100	ARL163CB	1/4	3	1 1/4	3	48.07
AR02503E6005S100	N/A	1/4	3	1 1/2	3	49.99
AR02503EW005S100	N/A	1/4	3	1 3/4	3	54.76
AR037538I001S100	ARS243CB	3/8	3	1/2	2	39.74
AR03753BU003S100	N/A	3/8	3	3/4	2 1/2	41.82
AR03753CS003S100	ARR243CB	3/8	3	1	2 1/2	43.10
AR03753DG005S100	ARM243CB	3/8	3	1 1/4	3	63.18
AR03753E6007S100	ARL243CB	3/8	3	1 1/2	3 1/2	69.70
AR03753EW007S100	N/A	3/8	3	1 3/4	3 1/2	72.14
AR03753FK009S100	N/A	3/8	3	2	4	77.20
AR03753GS009S100	N/A	3/8	3	2 1/2	4	79.87
AR05003A6003S100	ARS323CB	1/2	3	5/8	2 1/2	59.98
AR05003CS005S100	N/A	1/2	3	1	3	63.50
AR05003DG005S100	ARR323CB	1/2	3	1 1/4	3	66.19
AR05003EI007S100	ARM323CB	1/2	3	1 5/8	3 1/2	81.11
AR05003FK009S100	ARL323CB	1/2	3	2	4	89.90
AR05003GS00ES100	N/A	1/2	3	2 1/2	5	95.76
AR05003HY00ES100	N/A	1/2	3	3	5	99.99
AR05003J400IS100	N/A	1/2	3	3 1/2	6	114.72
AR06253BU005S100	ARS403CB	5/8	3	3/4	3	99.86
AR06253DG005S100	N/A	5/8	3	1 1/4	3	105.38
AR06253EI007S100	ARR403CB	5/8	3	1 5/8	3 1/2	111.33
AR06253FK009S100	ARM403CB	5/8	3	2	4	136.43
AR06253G6009S100	N/A	5/8	3	2 1/4	4	147.49
AR06253GS00ES100	ARL403CB	5/8	3	2 1/2	5	158.42
AR06253I00ES100	N/A	5/8	3	3 1/4	5	163.79
AR06253J400IS100	N/A	5/8	3	3 1/2	6	178.10
AR06253JQ00IS100	N/A	5/8	3	3 3/4	6	184.89
AR06253KA00IS100	N/A	5/8	3	4	6	199.67
AR07503BU005S100	ARS483CB	3/4	3	3/4	3	135.80
AR07503D4007S100	N/A	3/4	3	1 1/8	3 1/2	143.82
AR07503EI009S100	ARR483CB	3/4	3	1 5/8	4	151.00
AR07503G600ES100	ARM483CB	3/4	3	2 1/4	5	186.93
AR07503H200ES100	N/A	3/4	3	2 5/8	5	206.87
AR07503I00IS100	ARL483CB	3/4	3	3 1/4	6	223.18
AR07503JE00IS100	N/A	3/4	3	3 5/8	6	249.56
AR07503KA00KS100	N/A	3/4	3	4	6 1/2	264.28
AR07503LG00LS100	N/A	3/4	3	4 1/2	7	299.95
AR10003CS005S100	ARS643CB	1	3	1	3	268.22
AR10003E6009S100	N/A	1	3	1 1/2	4	282.18
AR10003FK00BS100	ARR643CB	1	3	2	4 1/2	293.23
AR10003H200ES100	ARM643CB	1	3	2 5/8	5	327.16
AR10003I00IS100	ARL643CB	1	3	3 1/4	6	379.98
AR10003KW00LS100	N/A	1	3	4 1/4	7	408.70
AR10003NI00PS100	N/A	1	3	5 3/8	8	449.98
AR12503CS009S100	ARS803CB	1 1/4	3	1	4	419.98
AR12503FK00BS100	ARR803CB	1 1/4	3	2	4 1/2	489.98
AR12503H200GS100	ARM803CB	1 1/4	3	2 5/8	5 1/2	574.98
AR12503I00IS100	ARL803CB	1 1/4	3	3 1/4	6	749.98
AR12503KW00NS100	N/A	1 1/4	3	4 1/4	7 1/2	774.98
AR12503MM00NS100	N/A	1 1/4	3	5	7 1/2	799.98
AR12503QK00RS100	N/A	1 1/4	3	6 1/4	9	849.98

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HIGH PERFORMANCE
CARBIDE TOOLS



THE "AR" SERIES
ROUGHERS HAVE A
CORNER RADIUS FOR
ADDED STRENGTH



ALUMINUM EXTENDED LENGTH HEAVY ROUGHER 3FL Series "AREL" End Mills FOR HEAVY ROUGHING OF ALUMINUM



NEW NUMBER	OLD #	DIA	FLUTES	LOC	LBS	OAL	PRICE
AR025036WBU1S100	ARELS163CB	1/4	3	3/8	3/4	2	42.84
AR025036WCS5S100	N/A	1/4	3	3/8	1	3	44.98
AR025036WDG5S100	N/A	1/4	3	3/8	1 1/4	3	45.76
AR025036WE6S100	ARELR163CB	1/4	3	3/8	1 1/2	3	46.74
AR025036WEW7S100	N/A	1/4	3	3/8	1 3/4	3 1/2	53.62
AR025036WFK7S100	ARELM163CB	1/4	3	3/8	2	3 1/2	59.98
AR025036WG6S100	N/A	1/4	3	3/8	2 1/4	3 1/2	64.72
AR025036WGS9S100	N/A	1/4	3	3/8	2 1/2	4	78.47
AR037538ICS3S100	ARELS243CB	3/8	3	1/2	1	2 1/2	57.11
AR037538IDG5S100	N/A	3/8	3	1/2	1 1/4	3	62.20
AR037538IE6S100	ARELR243CB	3/8	3	1/2	1 1/2	3	67.49
AR037538IFK7S100	ARELM243CB	3/8	3	1/2	2	3 1/2	72.97
AR037538IG69S100	N/A	3/8	3	1/2	2 1/4	4	77.91
AR037538IGS9S100	N/A	3/8	3	1/2	2 1/2	4	81.10
AR037538IHYES100	ARELL243CB	3/8	3	1/2	3	5	84.99
AR037538IJ4ES100	N/A	3/8	3	1/2	3 1/2	5	87.18
AR037538IJQES100	N/A	3/8	3	1/2	3 3/4	5	88.89
AR037538IKAIS100	ARELX243CB	3/8	3	1/2	4	6	89.99
AR05003A6CS5S100	ARELS323CB	1/2	3	5/8	1	3	69.99
AR05003A6DU5S100	N/A	1/2	3	5/8	1 3/8	3	74.99
AR05003A6E6S100	ARELR323CB	1/2	3	5/8	1 1/2	3 1/2	79.99
AR05003A6FK9S100	ARELM323CB	1/2	3	5/8	2	4	87.99
AR05003A6G69S100	N/A	1/2	3	5/8	2 1/4	4	91.45
AR05003A6GSBS100	N/A	1/2	3	5/8	2 1/2	4 1/2	95.98
AR05003A6HYES100	ARELL323CB	1/2	3	5/8	3	5	104.98
AR05003A6J4GS100	N/A	1/2	3	5/8	3 1/2	5 1/2	112.98
AR05003A6KAIS100	ARELX323CB	1/2	3	5/8	4	6	119.99
AR05003A6LGKS100	N/A	1/2	3	5/8	4 1/2	6 1/2	129.99
AR05003A6MMLS100	N/A	1/2	3	5/8	5	7	149.58
AR06253BUCS5S100	ARELS403CB	5/8	3	3/4	1	3	99.98
AR06253BUE6S100	ARELR403CB	5/8	3	3/4	1 1/2	3 1/2	112.98
AR06253BUEW9S100	N/A	5/8	3	3/4	1 3/4	4	131.60
AR06253BUBFK9S100	ARELM403CB	5/8	3	3/4	2	4	149.99
AR06253BUGGCS100	N/A	5/8	3	3/4	2 3/8	4 5/8	159.99
AR06253BUHYES100	ARELL403CB	5/8	3	3/4	3	5	169.99
AR06253BUJ4GS100	N/A	5/8	3	3/4	3 1/2	5 1/2	183.99
AR06253BUKAIS100	ARELX403CB	5/8	3	3/4	4	6	194.99
AR06253BULGKS100	N/A	5/8	3	3/4	4 1/2	6 1/2	204.99
AR06253BUMMLS100	N/A	5/8	3	3/4	5	7	219.99
AR06253BUNUNS100	N/A	5/8	3	3/4	5 1/2	7 1/2	239.99
AR07503CSFK9S100	ARELR483CB	3/4	3	1	2	4	159.98
AR07503CSGSBS100	N/A	3/4	3	1	2 1/2	4 1/2	182.98
AR07503CSHYES100	ARELM483CB	3/4	3	1	3	5	209.98
AR07503CSJ4GS100	N/A	3/4	3	1	3 1/2	5 1/2	216.87
AR07503CSKAIS100	ARELL483CB	3/4	3	1	4	6	226.92
AR07503CSLGS100	ARELX483CB	3/4	3	1	4 1/2	6 1/2	259.98
AR07503CSMMLS100	N/A	3/4	3	1	5	7	274.98
AR07503CSNUNS100	N/A	3/4	3	1	5 1/2	7 1/2	295.98
AR07503CSQ0PS100	N/A	3/4	3	1	6	8	319.98
AR10003CSE69S100	ARELR643CB	1	3	1	1 1/2	4	246.98
AR10003DGFKBS100	N/A	1	3	1 1/4	2	4 1/2	257.27
AR10003DGGSES100	ARELM643CB	1	3	1 1/4	2 1/2	5	268.98
AR10003DGHCGS100	N/A	1	3	1 1/4	2 3/4	5 1/2	299.48
AR10003DGJ4S100	ARELL643CB	1	3	1 1/4	3 1/2	6	326.78
AR10003DGKAKS100	N/A	1	3	1 1/4	4	6 1/2	337.98
AR10003DGLGLS100	ARELX643CB	1	3	1 1/4	4 1/2	7	349.99
AR10003DGMMS100	N/A	1	3	1 1/4	5	7 1/2	379.99
AR10003DGNUPS100	N/A	1	3	1 1/4	5 1/2	8	399.99
AR10003DGQ0QS100	N/A	1	3	1 1/4	6	8 1/2	439.99
AR10003DGR6RS100	N/A	1	3	1 1/4	6 1/2	9	479.99
AR10003DGS0QS100	N/A	1	3	1 1/4	7	9 1/2	519.99
AR10003DGTITS100	N/A	1	3	1 1/4	7 1/2	10	579.99

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SWIFTCARB HIGH
PERFORMANCE CARBIDE



ALUMINUM HYPER SPEED ROUGHER FINISHER 3FL Series "HS" End Mills FOR HIGH RPM ROUGHING/FINISHING OF ALUMINUM

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HIGH PERFORMANCE
CARBIDE TOOLS



NEW NUMBER	OLD #	DIA	#FL	LOC	OAL	PRICE
AS0125358000S100	HSS083CB	1/8	3	1/4	1 1/2	19.81
AS012536W001S100	HSR083CB	1/8	3	3/8	2	20.98
AS012538I001S100	N/A	1/8	3	1/2	2	23.99
AS0187362001S100	HSS123CB	3/16	3	5/16	2	20.59
AS018739C001S100	HSR123CB	3/16	3	9/16	2	21.76
AS025036W001S100	HSS163CB	1/4	3	3/8	2	21.89
AS025038I001S100	N/A	1/4	3	1/2	2	23.65
AS02503BU003S100	HSR163CB	1/4	3	3/4	2 1/2	24.33
AS02503CS005S100	HSM163CB	1/4	3	1	3	37.30
AS02503DG005S100	N/A	1/4	3	1 1/4	3	43.87
AS02503E6005S100	N/A	1/4	3	1 1/2	3	47.83
AS031237Q004S100	HSS203CB	5/16	3	7/16	2 3/4	23.67
AS03123BU003S100	HSR203CB	5/16	3	3/4	2 1/2	26.31
AS03123CS005S100	HSM203CB	5/16	3	1	3	42.06
AS03123DG005S100	N/A	5/16	3	1 1/4	3	44.97
AS03123E6005S100	N/A	5/16	3	1 1/2	3	47.98
AS03123FW009S100	N/A	5/16	3	2 1/8	4	51.47
AS037538I001S100	HSS243CB	3/8	3	1/2	2	27.65
AS03753BU003S100	N/A	3/8	3	3/4	2 1/2	28.75
AS03753CS003S100	HSR243CB	3/8	3	1	2 1/2	30.54
AS03753DG005S100	HSM243CB	3/8	3	1 1/4	3	46.00
AS03753E6007S100	N/A	3/8	3	1 1/2	3 1/2	58.22
AS03753EW007S100	N/A	3/8	3	1 3/4	3 1/2	62.98
AS03753FK009S100	N/A	3/8	3	2	4	64.25
AS03753G6009S100	N/A	3/8	3	2 1/4	4	69.47
AS03753GS00ES100	N/A	3/8	3	2 1/2	5	74.35
AS043739C004S100	HSS283CB	7/16	3	9/16	2 3/4	43.78
AS04373BU004S100	N/A	7/16	3	3/4	2 3/4	43.77
AS04373CS004S100	HSR283CB	7/16	3	1	2 3/4	43.76
AS04373DG005S100	N/A	7/16	3	1 1/4	3	47.36
AS04373E6009S100	HSM283CB	7/16	3	1 1/2	4	49.24
AS04373EW009S100	N/A	7/16	3	1 3/4	4	54.82
AS04373FK009S100	N/A	7/16	3	2	4	59.15
AS05003A6003S100	HSS323CB	1/2	3	5/8	2 1/2	44.53
AS05003CS005S100	N/A	1/2	3	1	3	47.98
AS05003DG005S100	HSR323CB	1/2	3	1 1/4	3	51.90
AS05003E6007S100	N/A	1/2	3	1 1/2	3 1/2	57.26
AS05003EI007S100	HSM323CB	1/2	3	1 5/8	3 1/2	63.46
AS05003EW009S100	N/A	1/2	3	1 3/4	4	69.66
AS05003FK009S100	N/A	1/2	3	2	4	77.90
AS05003GS00ES100	N/A	1/2	3	2 1/2	5	82.06
AS05003HC00ES100	N/A	1/2	3	2 3/4	5	88.26
AS05003HY00ES100	N/A	1/2	3	3	5	99.99
AS05003I800ES100	N/A	1/2	3	3 1/8	5	129.38

GET YOUR END MILLS WITH A RADIUS						
QTY-	1pc	2-5pc	6-10pc	11-20pc	21-29pc	30+pc
.012 - .090	22.50	18.50	16.00	12.00	8.00	5.00
.091 - .125	24.00	21.00	18.00	14.00	10.00	7.00
.126 - .160	26.50	24.00	20.00	16.00	12.00	8.00
.161 - .190	28.50	26.50	23.50	19.50	14.00	9.00
.191 - .250	36.50	35.00	30.00	24.00	18.00	10.00
STANDARD RADII IN STOCK!						

NEW NUMBER	OLD #	DIA	#FL	LOC	OAL	PRICE
AS06253BU005S100	HSS403CB	5/8	3	3/4	3	85.11
AS06253DG007S100	N/A	5/8	3	1 1/4	3 1/2	89.93
AS06253EI007S100	HSR403CB	5/8	3	1 5/8	3 1/2	94.19
AS06253FK009S100	HSM403CB	5/8	3	2	4	118.97
AS06253FW009S100	N/A	5/8	3	2 1/8	4	129.98
AS06253GS00CS100	N/A	5/8	3	2 1/2	4 5/8	141.31
AS06253HM00ES100	N/A	5/8	3	2 7/8	5	155.86
AS06253I000IS100	N/A	5/8	3	3 1/4	6	171.28
AS06253J400IS100	N/A	5/8	3	3 1/2	6	187.86
AS06253JQ00IS100	N/A	5/8	3	3 3/4	6	202.71
AS07503BU005S100	HSS483CB	3/4	3	3/4	3	118.54
AS07503CS009S100	N/A	3/4	3	1	4	123.73
AS07503DG007S100	N/A	3/4	3	1 1/4	3 1/2	128.35
AS07503EI009S100	HSR483CB	3/4	3	1 5/8	4	131.00
AS07503G600ES100	HSM483CB	3/4	3	2 1/4	5	172.20
AS07503H200ES100	N/A	3/4	3	2 5/8	5	189.52
AS07503I000IS100	N/A	3/4	3	3 1/4	6	201.26
AS07503J400IS100	N/A	3/4	3	3 1/2	6	234.98
AS07503KA00KS100	N/A	3/4	3	4	6 1/2	299.90
AS07503LG00LS100	N/A	3/4	3	4 1/2	7	329.98
AS10003CS005S100	HSS643CB	1	3	1	3	213.04
AS10003DG009S100	N/A	1	3	1 1/4	4	221.80
AS10003E6009S100	N/A	1	3	1 1/2	4	229.72
AS10003FK00BS100	HSR643CB	1	3	2	4 1/2	236.08
AS10003H200ES100	HSM643CB	1	3	2 5/8	5	254.42
AS10003I800IS100	N/A	1	3	3 1/8	6	268.45
AS10003I000IS100	N/A	1	3	3 1/4	6	282.21
AS10003J400IS100	N/A	1	3	3 1/2	6	319.98
AS10003KW00LS100	N/A	1	3	4 1/4	7	419.99
AS10003LS00LS100	N/A	1	3	4 5/8	7	439.71
AS12503CS009S100	HSS803CB	1 1/4	3	1	4	379.37
AS12503FK00BS100	HSR803CB	1 1/4	3	2	4 1/2	433.32
AS12503H200GS100	HSM803CB	1 1/4	3	2 5/8	5 1/2	498.93
AS12503J400IS100	N/A	1 1/4	3	3 1/2	6	549.98
AS12503MM00NS100	N/A	1 1/4	3	5	7 1/2	649.98



EXTENDED LENGTH ALUMINUM HYPER SPEED ROUGHER/FINISHER 3FL Series "HSEL" End Mills FOR HIGH RPM ROUGHING/FINISHING OF ALUMINUM



Designed for Deep Pocket, Step-Down
Machining and profiling

NEW NUMBER	OLD #	DIA	#FL	LOC	LBS	OAL	PRICE
AS01253588IOS100	HSELS083CB	1/8	3	1/4	1/2	1 1/2	35.25
AS01253588BU1S100	N/A	1/8	3	1/4	3/4	2	35.75
AS01253588CS1S100	HSELR083CB	1/8	3	1/4	1	2	36.00
AS01253588DG3S100	N/A	1/8	3	1/4	1 1/4	2 1/2	37.99
AS018736281S100	HSELS123CB	3/16	3	5/16	1/2	2	36.11
AS01873628BU5S100	N/A	3/16	3	5/16	3/4	3	36.99
AS01873628CS5S100	N/A	3/16	3	5/16	1	3	37.57
AS01873628DG5S100	N/A	3/16	3	5/16	1 1/4	3	38.12
AS01873628E6S100	HSELR123CB	3/16	3	5/16	1 1/2	3	38.61
AS01873628EW5S100	N/A	3/16	3	5/16	1 3/4	3	39.99
AS025036WBU1S100	HSELS163CB	1/4	3	3/8	3/4	2	38.25
AS025036WCS3S100	N/A	1/4	3	3/8	1	2 1/2	39.99
AS025036WDG3S100	N/A	1/4	3	3/8	1 1/4	2 1/2	40.65
AS025036WE6S100	HSELR163CB	1/4	3	3/8	1 1/2	3	41.62
AS025036WEW5S100	N/A	1/4	3	3/8	1 3/4	3	47.98
AS025036WFK7S100	HSELM163CB	1/4	3	3/8	2	3 1/2	54.42
AS025036WG67S100	N/A	1/4	3	3/8	2 1/4	3 1/2	57.54
AS025036WGS9S100	N/A	1/4	3	3/8	2 1/2	4	63.99
AS031237QBU1S100	N/A	5/16	3	7/16	3/4	2	39.99
AS031237QCS3S100	HSELS203CB	5/16	3	7/16	1	2 1/2	41.09
AS031237QDG3S100	N/A	5/16	3	7/16	1 1/4	2 1/2	51.99
AS031237QE6S100	HSELR203CB	5/16	3	7/16	1 1/2	3	62.20
AS031237QEW5S100	N/A	5/16	3	7/16	1 3/4	3	63.98
AS031237QFK7S100	HSELM203CB	5/16	3	7/16	2	3 1/2	65.53
AS031237QG67S100	N/A	5/16	3	7/16	2 1/4	3 1/2	67.96
AS031237QGS9S100	N/A	5/16	3	7/16	2 1/2	4	73.82
AS031237QI8S100	N/A	5/16	3	7/16	3 1/8	6	79.99
AS031237QKAI100	N/A	5/16	3	7/16	4	6	84.99
AS037538ICS3S100	HSELS243CB	3/8	3	1/2	1	2 1/2	55.53
AS037538IDG5S100	N/A	3/8	3	1/2	1 1/4	3	59.99
AS037538IE6S100	HSELR243CB	3/8	3	1/2	1 1/2	3	64.42
AS037538IFK7S100	HSELM243CB	3/8	3	1/2	2	3 1/2	66.64
AS037538IG69S100	N/A	3/8	3	1/2	2 1/4	4	69.99
AS037538IGSBS100	N/A	3/8	3	1/2	2 1/2	4 1/2	73.28
AS037538IHYES100	HSELL243CB	3/8	3	1/2	3	5	77.76
AS037538IJ4GS100	N/A	3/8	3	1/2	3 1/2	5 1/2	82.73
AS037538IJI100	N/A	3/8	3	1/2	3 3/4	6	85.27
AS037538IKAI100	HSELX243CB	3/8	3	1/2	4	6	87.76
AS043739CCS4S100	HSELS283CB	7/16	3	9/16	1	2 3/4	66.64
AS043739CDG4S100	N/A	7/16	3	9/16	1 1/4	2 3/4	69.99
AS043739CE67S100	N/A	7/16	3	9/16	1 1/2	3 1/2	72.47
AS043739CFK9S100	HSELM283CB	7/16	3	9/16	2	4	75.53
AS043739CGSBS100	N/A	7/16	3	9/16	2 1/2	4 1/2	86.99
AS043739CHYES100	HSELX283CB	7/16	3	9/16	3	5	98.87
AS043739CJ4GS100	N/A	7/16	3	9/16	3 1/2	5 1/2	102.98
AS043739CKAI100	N/A	7/16	3	9/16	4	6	104.98

NEW NUMBER	OLD #	DIA	#FL	LOC	LBS	OAL	PRICE
AS05003A6CS5S100	HSELS323CB	1/2	3	5/8	1	3	68.87
AS05003A6DU7S100	N/A	1/2	3	5/8	1 3/8	3 1/2	72.47
AS05003A6E67S100	HSELR323CB	1/2	3	5/8	1 1/2	3 1/2	76.58
AS05003A6FK9S100	HSELM323CB	1/2	3	5/8	2	4	79.98
AS05003A6G69S100	N/A	1/2	3	5/8	2 1/4	4	86.93
AS05003A6GSBS100	N/A	1/2	3	5/8	2 1/2	4 1/2	89.99
AS05003A6HYES100	HSELL323CB	1/2	3	5/8	3	5	94.42
AS05003A6J4GS100	N/A	1/2	3	5/8	3 1/2	5 1/2	102.16
AS05003A6KAI100	HSELX323CB	1/2	3	5/8	4	6	108.87
AS05003A6LGKS100	N/A	1/2	3	5/8	4 1/2	6 1/2	119.98
AS05003A6MMLS100	N/A	1/2	3	5/8	5	7	134.75
AS06253BUCSS5S100	HSELS403CB	5/8	3	3/4	1	3	96.64
AS06253BUE67S100	HSELR403CB	5/8	3	3/4	1 1/2	3 1/2	102.20
AS06253BUEW9S100	N/A	5/8	3	3/4	1 3/4	4	124.47
AS06253BUFK9S100	HSELM403CB	5/8	3	3/4	2	4	144.42
AS06253BUGGCS100	N/A	5/8	3	3/4	2 3/8	4 5/8	149.28
AS06253BUHYES100	HSELL403CB	5/8	3	3/4	3	5	154.42
AS06253BUJ4GS100	N/A	5/8	3	3/4	3 1/2	5 1/2	167.38
AS06253BUKAI100	HSELX403CB	5/8	3	3/4	4	6	177.76
AS06253BULGKS100	N/A	5/8	3	3/4	4 1/2	6 1/2	199.57
AS06253BUMMLS100	N/A	5/8	3	3/4	5	7	206.73
AS06253BUNUNS100	N/A	5/8	3	3/4	5 1/2	7 1/2	228.00
AS06253BUQ0PS100	N/A	5/8	3	3/4	6	8	236.52
AS07503CSFK9S100	HSELR483CB	3/4	3	1	2	4	149.98
AS07503CSGSBS100	N/A	3/4	3	1	2 1/2	4 1/2	169.36
AS07503CSHYES100	HSELM483CB	3/4	3	1	3	5	188.87
AS07503CSJ4GS100	N/A	3/4	3	1	3 1/2	5 1/2	194.84
AS07503CSKAI100	HSELL483CB	3/4	3	1	4	6	202.20
AS07503CSLGKS100	HSELX483CB	3/4	3	1	4 1/2	6 1/2	244.42
AS07503CSMMLS100	N/A	3/4	3	1	5	7	259.75
AS07503CSNUNS100	N/A	3/4	3	1	5 1/2	7 1/2	279.80
AS07503CSQ0PS100	N/A	3/4	3	1	6	8	299.50
AS10003CSE69S100	HSELR643CB	1	3	1 1/4	2	4	221.09
AS10003DGFKBS100	N/A	1	3	1 1/4	2	4 1/2	237.12
AS10003DGGSES100	HSELM643CB	1	3	1 1/4	2 1/2	5	252.20
AS10003DGHGCS100	N/A	1	3	1 1/4	2 3/4	5 1/2	272.65
AS10003DGJ4IS100	HSELL643CB	1	3	1 1/4	3 1/2	6	292.20
AS10003DGGKAKS100	N/A	1	3	1 1/4	4	6 1/2	314.94
AS10003DGLGLS100	HSELX643CB	1	3	1 1/4	4 1/2	7	333.31
AS10003DGMMS100	N/A	1	3	1 1/4	5	7 1/2	352.79
AS10003DGNUPS100	N/A	1	3	1 1/4	5 1/2	8	369.80
AS10003DGGQ0S100	N/A	1	3	1 1/4	6	8 1/2	389.50
AS10003DGR6RS100	N/A	1	3	1 1/4	6 1/2	9	419.87
AS10003DGGSCSS100	N/A	1	3	1 1/4	7	9 1/2	443.69
AS10003DGTITS100	N/A	1	3	1 1/4	7 1/2	10	479.99



BALL NOSE

ALUMINUM HYPER SPEED ROUGHER FINISHER 3FL

Series "BHS" End Mills

FOR HIGH RPM ROUGHING/FINISHING OF ALUMINUM

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HIGH PERFORMANCE
CARBIDE TOOLS



NEW NUMBER	OLD #	DIA	#FL	LOC	OAL	PRICE
AS0125358000B000	BHSS083CB	1/8	3	1/4	1 1/2	21.79
AS012536W001B000	BHSR083CB	1/8	3	3/8	2	23.07
AS012538I001B000	N/A	1/8	3	1/2	2	26.45
AS0187362001B000	BHSS123CB	3/16	3	5/16	2	22.65
AS018739C001B000	BHSR123CB	3/16	3	9/16	2	23.93
AS025036W001B000	BHSS163CB	1/4	3	3/8	2	24.08
AS025038I001B000	N/A	1/4	3	1/2	2	25.16
AS02503BU003B000	BHSR163CB	1/4	3	3/4	2 1/2	26.76
AS02503CS005B000	BHSM163CB	1/4	3	1	3	41.03
AS02503DG005B000	N/A	1/4	3	1 1/4	3	50.45
AS02503E6005B000	N/A	1/4	3	1 1/2	3	54.99
AS031237Q001B000	BHSS203CB	5/16	3	7/16	2	26.03
AS03123BU003B000	BHSR203CB	5/16	3	3/4	2 1/2	28.95
AS03123CS005B000	BHSM203CB	5/16	3	1	3	46.27
AS03123DG005B000	N/A	5/16	3	1 1/4	3	52.90
AS03123E6005B000	N/A	5/16	3	1 1/2	3	56.31
AS037538I001B000	BHSS243CB	3/8	3	1/2	2	30.41
AS03753BU003B000	N/A	3/8	3	3/4	2 1/2	32.99
AS03753CS003B000	BHSR243CB	3/8	3	1	2 1/2	33.59
AS03753DG005B000	BHSM243CB	3/8	3	1 1/4	3	50.60
AS03753E6007B000	N/A	3/8	3	1 1/2	3 1/2	66.95
AS03753EW007B000	N/A	3/8	3	1 3/4	3 1/2	72.43
AS03753FK009B000	N/A	3/8	3	2	4	73.89
AS03753G6009B000	N/A	3/8	3	2 1/4	4	79.89
AS043739C004B000	BHSS283CB	7/16	3	9/16	2 3/4	48.16
AS04373BU004B000	N/A	7/16	3	3/4	2 3/4	48.15
AS04373CS004B000	BHSR283CB	7/16	3	1	2 3/4	48.13
AS04373DG005B000	N/A	7/16	3	1 1/4	3	54.45
AS04373E6007B000	N/A	7/16	3	1 1/2	3 1/2	56.62
AS04373EW009B000	N/A	7/16	3	1 3/4	4	63.05
AS04373FK009B000	N/A	7/16	3	2	4	67.99
AS05003A6003B000	BHSS323CB	1/2	3	5/8	2 1/2	48.99
AS05003CS005B000	N/A	1/2	3	1	3	50.32
AS05003DG005B000	BHSR323CB	1/2	3	1 1/4	3	57.09
AS05003E6007B000	N/A	1/2	3	1 1/2	3 1/2	65.86
AS05003E1007B000	BHSM323CB	1/2	3	1 5/8	3 1/2	69.81
AS05003EW009B000	N/A	1/2	3	1 3/4	4	80.11
AS05003FK009B000	N/A	1/2	3	2	4	89.58
AS05003GS00EB000	N/A	1/2	3	2 1/2	5	94.37
AS05003HC00EB000	N/A	1/2	3	2 3/4	5	101.50
AS05003HY00EB000	N/A	1/2	3	3	5	114.98

NEW NUMBER	OLD #	DIA	#FL	LOC	OAL	PRICE
AS06253BU005B000	BHSS403CB	5/8	3	3/4	3	93.62
AS06253DG007B000	N/A	5/8	3	1 1/4	3 1/2	103.38
AS06253EI007B000	BHSR403CB	5/8	3	1 5/8	3 1/2	103.61
AS06253FK009B000	BHSM403CB	5/8	3	2	4	130.87
AS06253GS00CB000	N/A	5/8	3	2 1/2	4 5/8	162.50
AS06253HM00EB000	N/A	5/8	3	2 7/8	5	179.24
AS06253J4001B000	N/A	5/8	3	3 1/2	6	216.04
AS06253JQ001B000	N/A	5/8	3	3 3/4	6	233.11
AS07503BU005B000	BHSS483CB	3/4	3	3/4	3	130.39
AS07503DG007B000	N/A	3/4	3	1 1/4	3 1/2	137.60
AS07503EI009B000	BHSR483CB	3/4	3	1 5/8	4	144.10
AS07503G600EB000	BHSM483CB	3/4	3	2 1/4	5	189.42
AS07503H200EB000	N/A	3/4	3	2 5/8	5	217.94
AS07503J4001B000	N/A	3/4	3	3 1/2	6	270.22
AS07503LG00LB000	N/A	3/4	3	4 1/2	7	379.44
AS10003CS005B000	BHSS643CB	1	3	1	3	234.34
AS10003E6009B000	N/A	1	3	1 1/2	4	244.18
AS10003FK00BB000	BHSR643CB	1	3	2	4 1/2	259.69
AS10003H200EB000	BHSM643CB	1	3	2 5/8	5	279.86
AS10003I8001B000	N/A	1	3	3 1/8	6	308.71
AS10003J4001B000	N/A	1	3	3 1/2	6	367.97
AS10003KW00LB000	N/A	1	3	4 1/4	7	482.98
AS12503CS009B000	BHSS803CB	1 1/4	3	1	4	417.30
AS12503FK00BB000	BHSR803CB	1 1/4	3	2	4 1/2	476.66
AS12503H200GB000	BHSM803CB	1 1/4	3	2 5/8	5 1/2	548.82
AS12503J4001B000	N/A	1 1/4	3	3 1/2	6	632.49
AS12503MM00NB000	N/A	1 1/4	3	5	7 1/2	747.49



BALL NOSE EXTENDED LENGTH ALUMINUM HYPER SPEED ROUGHER/FINISHER 3FL Series "BHSEL" End Mills FOR HIGH RPM ROUGHING/FINISHING OF ALUMINUM



Designed for Deep Pocket, Step-Down
Machining and profiling

NEW NUMBER	CODE	DIA	#FL	LOC	LBS	OAL	PRICE	NEW NUMBER	CODE	DIA	#FL	LOC	LBS	OAL	PRICE
AS01253588I0B000	BHSELS083CB	1/8	3	1/4	1/2	1 1/2	38.77	AS05003A6CS5B000	BHSELS323CB	1/2	3	5/8	1	3	75.75
AS0125358BU1B000	N/A	1/8	3	1/4	3/4	2	39.32	AS05003A6DU7B000	N/A	1/2	3	5/8	1 3/8	3 1/2	79.71
AS0125358CS1B000	BHSELR083CB	1/8	3	1/4	1	2	39.60	AS05003A6E67B000	BHSELR323CB	1/2	3	5/8	1 1/2	3 1/2	84.24
AS0125358DG3B000	N/A	1/8	3	1/4	1 1/4	2 1/2	44.36	AS05003A6FK9B000	BHSELM323CB	1/2	3	5/8	2	4	87.98
AS01873628I1B000	BHSELS123CB	3/16	3	5/16	1/2	2	39.72	AS05003A6G69B000	N/A	1/2	3	5/8	2 1/4	4	95.62
AS0187362BU5B000	N/A	3/16	3	5/16	3/4	3	40.68	AS05003A6GSSB000	N/A	1/2	3	5/8	2 1/2	4 1/2	98.98
AS0187362CS5B000	N/A	3/16	3	5/16	1	3	41.32	AS05003A6HYEB000	BHSELL323CB	1/2	3	5/8	3	5	103.86
AS0187362DG5B000	N/A	3/16	3	5/16	1 1/4	3	41.93	AS05003A6J4GB000	N/A	1/2	3	5/8	3 1/2	5 1/2	112.37
AS0187362E65B000	BHSELR123CB	3/16	3	5/16	1 1/2	3	42.47	AS05003A6KAIB000	BHSELX323CB	1/2	3	5/8	4	6	119.75
AS0187362EW5B000	N/A	3/16	3	5/16	1 3/4	3	43.98	AS05003A6L6KB000	N/A	1/2	3	5/8	4 1/2	6 1/2	131.97
AS025036WBU1B000	BHSELS163CB	1/4	3	3/8	3/4	2	42.08	AS05003A6MLB000	N/A	1/2	3	5/8	5	7	148.22
AS025036WCS3B000	N/A	1/4	3	3/8	1	2 1/2	43.98	AS06253BUCS5B000	BHSELL403CB	5/8	3	3/4	1	3	106.31
AS025036WDG3B000	N/A	1/4	3	3/8	1 1/4	2 1/2	44.71	AS06253BUE67B000	BHSELR403CB	5/8	3	3/4	1 1/2	3 1/2	112.42
AS025036WE65B000	BHSELR163CB	1/4	3	3/8	1 1/2	3	45.78	AS06252BUEW9B000	N/A	5/8	2	3/4	1 3/4	4	136.91
AS025036WEV5B000	N/A	1/4	3	3/8	1 3/4	3	52.77	AS06253BUEFK9B000	BHSELM403CB	5/8	3	3/4	2	4	158.86
AS025036WFK7B000	BHSELM163CB	1/4	3	3/8	2	3 1/2	59.86	AS06253BUGGCB000	N/A	5/8	3	3/4	2 3/8	4 5/8	164.20
AS025036WG67B000	N/A	1/4	3	3/8	2 1/4	3 1/2	63.29	AS06253BUHYEB000	BHSELL403CB	5/8	3	3/4	3	5	169.86
AS025036WGS9B000	N/A	1/4	3	3/8	2 1/2	4	70.38	AS06253BUJ4GB000	N/A	5/8	3	3/4	3 1/2	5 1/2	184.11
AS031237QBU1B000	N/A	5/16	3	7/16	3/4	2	43.98	AS06253BUKAIB000	BHSELX403CB	5/8	3	3/4	4	6	195.53
AS031237QCS3B000	BHSELS203CB	5/16	3	7/16	1	2 1/2	45.20	AS06253BULGKB000	N/A	5/8	3	3/4	4 1/2	6 1/2	219.52
AS031237QDG3B000	N/A	5/16	3	7/16	1 1/4	2 1/2	57.18	AS06253BUMMLB000	N/A	5/8	3	3/4	5	7	227.40
AS031237QE65B000	BHSELR203CB	5/16	3	7/16	1 1/2	3	68.42	AS06253BUNUNB000	N/A	5/8	3	3/4	5 1/2	7 1/2	250.80
AS031237QEW5B000	N/A	5/16	3	7/16	1 3/4	3	70.37	AS06253BUQPB000	N/A	5/8	3	3/4	6	8	260.17
AS031237QFK7B000	BHSELM203CB	5/16	3	7/16	2	3 1/2	72.09	AS07503CSFK9B000	BHSELR483CB	3/4	3	1	2	4	164.98
AS031237QG67B000	N/A	5/16	3	7/16	2 1/4	3 1/2	74.75	AS07503CSGSBB000	N/A	3/4	3	1	2 1/2	4 1/2	186.29
AS031237QGS9B000	N/A	5/16	3	7/16	2 1/2	4	81.20	AS07503CSHYEB000	BHSELM483CB	3/4	3	1	3	5	207.75
AS031237QI8I0B000	N/A	5/16	3	7/16	3 1/8	6	87.98	AS07503CSJ4GB000	N/A	3/4	3	1	3 1/2	5 1/2	214.32
AS031237QKAI0B000	N/A	5/16	3	7/16	4	6	93.48	AS07503CSKAIB000	BHSELL483CB	3/4	3	1	4	6	222.42
AS037538ICS3B000	BHSELS243CB	3/8	3	1/2	1	2 1/2	61.09	AS07503CSLGBK000	BHSELX483CB	3/4	3	1	4 1/2	6 1/2	268.86
AS037538IDG5B000	N/A	3/8	3	1/2	1 1/4	3	65.98	AS07503CSMMLB000	N/A	3/4	3	1	5	7	285.72
AS037538IE65B000	BHSELR243CB	3/8	3	1/2	1 1/2	3	70.86	AS07503CSNUNB000	N/A	3/4	3	1	5 1/2	7 1/2	307.78
AS037538IFK7B000	BHSELM243CB	3/8	3	1/2	2	3 1/2	73.31	AS07503CSQOPB000	N/A	3/4	3	1	6	8	329.45
AS037538IG69B000	N/A	3/8	3	1/2	2 1/4	4	76.98	AS10003CSE69B000	BHSELR643CB	1	3	1	1 1/2	4	243.20
AS037538IGSBB000	N/A	3/8	3	1/2	2 1/2	4 1/2	80.60	AS10003DGFKB000	N/A	1	3	1 1/4	2	4 1/2	260.83
AS037538IHYEB000	BHSELL243CB	3/8	3	1/2	3	5	85.53	AS10003DGGSEB000	BHSELM643CB	1	3	1 1/4	2 1/2	5	277.42
AS037538IJ4GB000	N/A	3/8	3	1/2	3 1/2	5 1/2	91.00	AS10003DGHGCB000	N/A	1	3	1 1/4	2 3/4	5 1/2	299.91
AS037538IJI0B000	N/A	3/8	3	1/2	3 3/4	6	93.79	AS10003DGJ4IB000	BHSELL643CB	1	3	1 1/4	3 1/2	6	321.42
AS037538IKAIB000	BHSELX243CB	3/8	3	1/2	4	6	96.53	AS10003DGGKAKB000	N/A	1	3	1 1/4	4	6 1/2	346.43
AS043739CCS4B000	BHSELS283CB	7/16	3	9/16	1	2 3/4	73.31	AS10003DGLGLB000	BHSELX643CB	1	3	1 1/4	4 1/2	7	366.64
AS043739CDG4B000	N/A	7/16	3	9/16	1 1/4	2 3/4	76.98	AS10003DGMNMB000	N/A	1	3	1 1/4	5	7 1/2	388.07
AS043739CE67B000	N/A	7/16	3	9/16	1 1/2	3 1/2	79.71	AS10003DGNUPB000	N/A	1	3	1 1/4	5 1/2	8	406.78
AS043739CFK9B000	BHSELM283CB	7/16	3	9/16	2	4	83.09	AS10003DGQORB000	N/A	1	3	1 1/4	6	8 1/2	428.40
AS043739CGSBB000	N/A	7/16	3	9/16	2 1/2	4 1/2	95.68	AS10003DGGQORB000	N/A	1	3	1 1/4	6	9	461.85
AS043739CHYEB000	BHSELX283CB	7/16	3	9/16	3	5	108.75	AS10003DGGSCSB000	N/A	1	3	1 1/4	7	9 1/2	488.05
AS043739CJ4GB000	N/A	7/16	3	9/16	3 1/2	5 1/2	113.27	AS10003DGTITB000	N/A	1	3	1 1/4	7 1/2	10	527.98
AS043739CKAIB000	N/A	7/16	3	9/16	4	6	115.47								



ALUMINUM 45° HELIX MILLS 2 & 3 FL Series "SC" End Mills HIGH PERFORMANCE END MILLS FOR ALUMINUM



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HIGH PERFORMANCE
CARBIDE TOOLS



2 FL NEW NUMBER	2FL OLD #	DIA	LOC	OAL	PRICE	3FL NEW NUMBER	3FL OLD #	PRICE
AC0125258000S100	SCS082CB	1/8	1/4	1 1/2	17.83	AC0125358000S100	SCS083CB	19.81
AC012526W001S100	SCR082CB	1/8	3/8	2	18.88	AC012536W001S100	SCR083CB	20.98
AC012528I001S100	N/A	1/8	1/2	2	21.59	AC012538I001S100	N/A	23.99
AC01252BU003S100	N/A	1/8	3/4	2 1/2	23.39	AC01253BU003S100	N/A	25.99
AC0187262001S100	SCS122CB	3/16	5/16	2	18.53	AC0187362001S100	SCS123CB	20.59
AC018729C001S100	SCR122CB	3/16	9/16	2	19.58	AC018739C001S100	SCR123CB	21.76
AC01872A6001S100	N/A	3/16	5/8	2	21.22	AC01873A6001S100	N/A	23.58
AC01872BU003S100	N/A	3/16	3/4	2 1/2	23.36	AC01873BU003S100	N/A	25.96
AC025026W001S100	SCS162CB	1/4	3/8	2	19.70	AC025036W001S100	SCS163CB	21.89
AC025028I001S100	N/A	1/4	1/2	2	21.28	AC025038I001S100	N/A	23.65
AC02502A6003S100	N/A	1/4	5/8	2 1/2	21.59	AC02503A6003S100	N/A	23.99
AC02502BU003S100	SCR162CB	1/4	3/4	2 1/2	21.89	AC02503BU003S100	SCR163CB	24.33
AC02502CS005S100	SCM162CB	1/4	1	3	33.57	AC02503CS005S100	SCM163CB	37.30
AC02502DG005S100	SCL162CB	1/4	1 1/4	3	34.11	AC02503DG005S100	SCL163CB	37.90
AC02502E6005S100	N/A	1/4	1 1/2	3	43.04	AC02503E6005S100	N/A	47.83
AC02502EW005S100	N/A	1/4	1 3/4	3	47.69	AC02503EW005S100	N/A	52.99
AC031227Q001S100	SCS202CB	5/16	7/16	2	21.30	AC031237Q001S100	SCS203CB	23.67
AC031228I001S100	N/A	5/16	1/2	2	22.49	AC031238I001S100	N/A	24.99
AC03122BU003S100	SCR202CB	5/16	3/4	2 1/2	23.68	AC03123BU003S100	SCR203CB	26.31
AC03122C2003S100	N/A	5/16	13/16	2 1/2	31.20	AC03123C2003S100	N/A	34.67
AC03122CS005S100	SCM202CB	5/16	1	3	37.86	AC03123CS005S100	SCM203CB	42.06
AC03122DG005S100	SCL202CB	5/16	1 1/4	3	45.11	AC03123DG005S100	SCL203CB	50.12
AC03122EW007S100	N/A	5/16	1 3/4	3 1/2	47.12	AC03123EW007S100	N/A	52.36
AC03122FW009S100	SCX202CB	5/16	2 1/8	4	51.88	AC03123FW009S100	SCX203CB	57.65
AC037528I001S100	SCS242CB	3/8	1/2	2	24.88	AC037538I001S100	SCS243CB	27.65
AC03752BU003S100	N/A	3/8	3/4	2 1/2	25.87	AC03753BU003S100	N/A	28.75
AC03752CS003S100	SCR242CB	3/8	1	2 1/2	27.49	AC03753CS003S100	SCR243CB	30.54
AC03752DG007S100	SCM242CB	3/8	1 1/4	3 1/2	41.40	AC03753DG007S100	SCM243CB	46.00
AC03752E6007S100	SCL242CB	3/8	1 1/2	3 1/2	52.40	AC03753E6007S100	SCL243CB	58.22
AC03752EW007S100	N/A	3/8	1 3/4	3 1/2	56.68	AC03753EW007S100	N/A	62.98
AC03752FK009S100	N/A	3/8	2	4	57.82	AC03753FK009S100	N/A	64.25
AC03752G6009S100	N/A	3/8	2 1/4	4	62.52	AC03753G6009S100	N/A	69.47
AC03752GS00ES100	SCX242CB	3/8	2 1/2	5	64.35	AC03753GS00ES100	SCX243CB	71.50
AC043729C004S100	SCS282CB	7/16	9/16	2 3/4	39.40	AC043739C004S100	SCS283CB	43.78
AC04372BU004S100	N/A	7/16	3/4	2 3/4	39.39	AC04373BU004S100	N/A	43.77
AC04372CS004S100	SCR282CB	7/16	1	2 3/4	39.38	AC04373CS004S100	SCR283CB	43.76
AC04372DG007S100	N/A	7/16	1 1/4	3 1/2	42.62	AC04373DG007S100	N/A	47.36
AC04372E6007S100	N/A	7/16	1 1/2	3 1/2	44.31	AC04373E6007S100	N/A	49.24
AC04372EW009S100	N/A	7/16	1 3/4	4	49.33	AC04373EW009S100	N/A	54.82
AC04372FK009S100	SCL282CB	7/16	2	4	59.97	AC04373FK009S100	SCL283CB	66.63
AC04372H200ES100	N/A	7/16	2 5/8	5	67.49	AC04373H200ES100	N/A	74.99



ALUMINUM 45° HELIX MILLS 2 & 3 FL CONTINUED

Series "SC" End Mills

HIGH PERFORMANCE END MILLS FOR ALUMINUM



2 FL NEW NUMBER	2FL OLD #	DIA	LOC	OAL	PRICE	3FL NEW NUMBER	3FL OLD #	PRICE
AC05002A6003S100	SCS322CB	1/2	5/8	2 1/2	40.08	AC05003A6003S100	SCS323CB	44.53
AC05002CS005S100	N/A	1/2	1	3	43.18	AC05003CS005S100	N/A	47.98
AC05002DG005S100	SCR322CB	1/2	1 1/4	3	46.71	AC05003DG005S100	SCR323CB	51.90
AC05002E6007S100	N/A	1/2	1 1/2	3 1/2	51.53	AC05003E6007S100	N/A	57.26
AC05002EI007S100	SCM322CB	1/2	1 5/8	3 1/2	57.11	AC05003EI007S100	SCM323CB	63.46
AC05002EW009S100	N/A	1/2	1 3/4	4	62.69	AC05003EW009S100	N/A	69.66
AC05002FK009S100	SCL322CB	1/2	2	4	70.11	AC05003FK009S100	SCL323CB	77.90
AC05002G600ES100	N/A	1/2	2 1/4	5	71.99	AC05003G600ES100	N/A	79.99
AC05002GS00ES100	N/A	1/2	2 1/2	5	73.85	AC05003GS00ES100	N/A	82.06
AC05002HC00ES100	N/A	1/2	2 3/4	5	79.43	AC05003HC00ES100	N/A	88.26
AC05002HY00ES100	N/A	1/2	3	5	89.99	AC05003HY00ES100	N/A	99.99
AC05002I800ES100	SCX322CB	1/2	3 1/8	5	116.44	AC05003I800ES100	SCX323CB	129.38
AC05002I100IS100	N/A	1/2	3 1/4	6	133.88	AC05003I100IS100	N/A	148.76
AC05002J400IS100	N/A	1/2	3 1/2	6	143.98	AC05003J400IS100	N/A	159.98
AC06252BU005S100	SCS402CB	5/8	3/4	3	76.60	AC06253BU005S100	SCS403CB	85.11
AC06252DG007S100	N/A	5/8	1 1/4	3 1/2	80.93	AC06253DG007S100	N/A	89.93
AC06252EI007S100	SCR402CB	5/8	1 5/8	3 1/2	84.77	AC06253EI007S100	SCR403CB	94.19
AC06252F8009S100	N/A	5/8	1 7/8	4	95.73	AC06253F8009S100	N/A	106.37
AC06252FK009S100	SCM402CB	5/8	2	4	107.07	AC06253FK009S100	SCM403CB	118.97
AC06252G600ES100	N/A	5/8	2 1/4	5	122.71	AC06253G600ES100	N/A	136.35
AC06252GS00ES100	SCL402CB	5/8	2 1/2	5	127.18	AC06253GS00ES100	SCL403CB	141.31
AC06252HC00ES100	N/A	5/8	2 3/4	5	137.30	AC06253HC00ES100	N/A	152.56
AC06252I100IS100	N/A	5/8	3 1/4	6	154.15	AC06253I100IS100	N/A	171.28
AC06252JQ00IS100	SCX402CB	5/8	3 3/4	6	182.43	AC06253JQ00IS100	SCX403CB	202.71
AC06252LS00LS100	N/A	5/8	4 5/8	7	197.98	AC06253LS00LS100	N/A	219.98
AC07502BU005S100	SCS482CB	3/4	3/4	3	106.68	AC07503BU005S100	SCS483CB	118.54
AC07502CS009S100	N/A	3/4	1	4	111.35	AC07503CS009S100	N/A	123.73
AC07502DU009S100	N/A	3/4	1 3/8	4	115.72	AC07503DU009S100	N/A	128.58
AC07502EI009S100	SCR482CB	3/4	1 5/8	4	117.90	AC07503EI009S100	SCR483CB	131.00
AC07502G600ES100	SCM482CB	3/4	2 1/4	5	154.98	AC07503G600ES100	SCM483CB	172.20
AC07502GS00ES100	N/A	3/4	2 1/2	5	169.18	AC07503GS00ES100	N/A	187.98
AC07502I100IS100	SCL482CB	3/4	3 1/4	6	181.13	AC07503I100IS100	SCL483CB	201.26
AC07502J400IS100	N/A	3/4	3 1/2	6	211.48	AC07503J400IS100	N/A	234.98
AC07502KA00KS100	SCX482CB	3/4	4	6 1/2	269.91	AC07503KA00KS100	SCX483CB	299.90
AC07502LG00LS100	N/A	3/4	4 1/2	7	296.98	AC07503LG00LS100	N/A	329.98
AC10002CS005S100	SCS642CB	1	1	3	191.73	AC10003CS005S100	SCS643CB	213.04
AC10002DG009S100	N/A	1	1 1/4	4	199.62	AC10003DG009S100	N/A	221.80
AC10002E6009S100	N/A	1	1 1/2	4	206.74	AC10003E6009S100	N/A	229.72
AC10002FK00BS100	SCR642CB	1	2	4 1/2	212.47	AC10003FK00BS100	SCR643CB	236.08
AC10002H200ES100	SCM642CB	1	2 5/8	5	228.98	AC10003H200ES100	SCM643CB	254.42
AC10002HY00IS100	N/A	1	3	6	236.96	AC10003HY00IS100	N/A	263.29
AC10002I100IS100	SCL642CB	1	3 1/4	6	253.99	AC10003I100IS100	SCL643CB	282.21
AC10002J400IS100	N/A	1	3 1/2	6	287.98	AC10003J400IS100	N/A	319.98
AC10002KK00LS100	SCX642CB	1	4 1/8	7	374.65	AC10003KK00LS100	SCX643CB	416.28
AC10002LG00LS100	N/A	1	4 1/2	7	377.99	AC10003LG00LS100	N/A	419.99
AC10002N800PS100	N/A	1	5 1/4	8	413.62	AC10003N800PS100	N/A	459.58
AC12502CS009S100	SCS802CB	1 1/4	1	4	341.43	AC12503CS009S100	SCS803CB	379.37
AC12502FK00BS100	SCR802CB	1 1/4	2	4 1/2	389.99	AC12503FK00BS100	SCR803CB	433.32
AC12502H200GS100	SCM802CB	1 1/4	2 5/8	5 1/2	453.60	AC12503H200GS100	SCM803CB	498.93
AC12502I100IS100	SCL802CB	1 1/4	3 1/4	6	488.25	AC12503I100IS100	SCL803CB	542.50
AC12502KW00NS100	SCX802CB	1 1/4	4 1/4	7 1/2	568.57	AC12503KW00NS100	SCX803CB	631.75
AC12502NU00RS100	N/A	1 1/4	5 1/2	9	620.55	AC12503NU00RS100	N/A	689.50



EXTENDED REACH ALUMINUM 45° HELIX END MILLS 2FL Series "SCEL" End Mills HIGH PERFORMANCE END MILLS FOR ALUMINUM



Designed for Deep Pocket, Step-Down
Machining and profiling

NEW NUMBER	OLD #	DIA	FLUTES	LOC	LBS	OAL	PRICE
AC0125258810S100	SCELS082CB	1/8	2	1/4	1/2	1 1/2	31.73
AC0125258BU1S100	N/A	1/8	2	1/4	3/4	2	32.17
AC0125258CS1S100	SCELR082CB	1/8	2	1/4	1	2	32.40
AC0125258DG3S100	N/A	1/8	2	1/4	1 1/4	2 1/2	33.99
AC0187262811S100	SCELS122CB	3/16	2	5/16	1/2	2	32.50
AC0187262BU5S100	N/A	3/16	2	5/16	3/4	3	33.29
AC0187262CS5S100	N/A	3/16	2	5/16	1	3	33.81
AC0187262DG5S100	N/A	3/16	2	5/16	1 1/4	3	34.30
AC0187262E6S100	SCELR122CB	3/16	2	5/16	1 1/2	3	34.75
AC0187262EW5S100	N/A	3/16	2	5/16	1 3/4	3	35.99
AC025026WBU1S100	SCELS162CB	1/4	2	3/8	3/4	2	34.43
AC025026WCS3S100	N/A	1/4	2	3/8	1	2 1/2	35.99
AC025026WDG3S100	N/A	1/4	2	3/8	1 1/4	2 1/2	36.58
AC025026WE6S100	SCELR162CB	1/4	2	3/8	1 1/2	3	37.45
AC025026WEW5S100	N/A	1/4	2	3/8	1 3/4	3	43.18
AC025026WFK7S100	SCELM162CB	1/4	2	3/8	2	3 1/2	48.98
AC025026WG67S100	N/A	1/4	2	3/8	2 1/4	3 1/2	51.78
AC025026WGS9S100	N/A	1/4	2	3/8	2 1/2	4	57.59
AC031227QBU1S100	N/A	5/16	2	7/16	3/4	2	35.99
AC031227QCS3S100	SCELS202CB	5/16	2	7/16	1	2 1/2	36.98
AC031227QDG3S100	N/A	5/16	2	7/16	1 1/4	2 1/2	46.79
AC031227QE6S100	SCELR202CB	5/16	2	7/16	1 1/2	3	55.98
AC031227QEW5S100	N/A	5/16	2	7/16	1 3/4	3	57.58
AC031227QFK7S100	SCELM202CB	5/16	2	7/16	2	3 1/2	58.98
AC031227QG67S100	N/A	5/16	2	7/16	2 1/4	3 1/2	61.16
AC031227QGS9S100	N/A	5/16	2	7/16	2 1/2	4	66.43
AC031227QI8IS100	N/A	5/16	2	7/16	3 1/8	6	71.99
AC031227QK AIS100	N/A	5/16	2	7/16	4	6	76.49
AC037528ICS3S100	SCELS242CB	3/8	2	1/2	1	2 1/2	49.98
AC037528IDG5B000	N/A	3/8	2	1/2	1 1/4	3	53.99
AC037528IE6S100	SCELR242CB	3/8	2	1/2	1 1/2	3	57.98
AC037528IFK7S100	SCELM242CB	3/8	2	1/2	2	3 1/2	59.98
AC037528IG69S100	N/A	3/8	2	1/2	2 1/4	4	62.99
AC037528IGSBS100	N/A	3/8	2	1/2	2 1/2	4 1/2	65.95
AC037528IHYES100	SCCELL242CB	3/8	2	1/2	3	5	69.98
AC037528IJ4GS100	N/A	3/8	2	1/2	3 1/2	5 1/2	74.45
AC037528IJQIS100	N/A	3/8	2	1/2	3 3/4	6	76.74
AC037528IK AIS100	SCELX242CB	3/8	2	1/2	4	6	78.98
AC043729CCS4S100	SCELS282CB	7/16	2	9/16	1	2 3/4	59.98
AC043739CDG4S100	N/A	7/16	3	9/16	1 1/4	2 3/4	62.99
AC043729CE67S100	N/A	7/16	2	9/16	1 1/2	3 1/2	65.22
AC043729CFK9S100	SCELM282CB	7/16	2	9/16	2	4	67.98
AC043729CGSBS100	N/A	7/16	2	9/16	2 1/2	4 1/2	78.29
AC043729CHYES100	SCELX282CB	7/16	2	9/16	3	5	88.98
AC043729CJ4GS100	N/A	7/16	2	9/16	3 1/2	5 1/2	92.68
AC043729CK AIS100	N/A	7/16	2	9/16	4	6	94.48

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HIGH PERFORMANCE
CARBIDE TOOLS



EXTENDED REACH ALUMINUM 45° HELIX END MILLS 2FL Series "SCEL" End Mills HIGH PERFORMANCE END MILLS FOR ALUMINUM



Designed for Deep Pocket, Step-Down
Machining and profiling

NEW NUMBER	OLD #	DIA	FLUTES	LOC	LBS	OAL	PRICE
AC05002A6CS5S100	SCELS322CB	1/2	2	5/8	1	3	61.98
AC05003A6DU7S100	N/A	1/2	3	5/8	1 3/8	3 1/2	65.22
AC05002A6E67S100	SCELR322CB	1/2	2	5/8	1 1/2	3 1/2	68.92
AC05002A6FK9S100	SCELM322CB	1/2	2	5/8	2	4	71.98
AC05003A6G69S100	N/A	1/2	3	5/8	2 1/4	4	78.23
AC05002A6GSBS100	N/A	1/2	2	5/8	2 1/2	4 1/2	80.99
AC05002A6HYES100	SCELL322CB	1/2	2	5/8	3	5	84.98
AC05002A6J4GS100	N/A	1/2	2	5/8	3 1/2	5 1/2	91.94
AC05002A6KAIS100	SCELY322CB	1/2	2	5/8	4	6	97.98
AC05002A6LGKS100	N/A	1/2	2	5/8	4 1/2	6 1/2	107.98
AC05002A6MMLS100	N/A	1/2	2	5/8	5	7	121.27
AC06252BUCS5S100	SCELS402CB	5/8	2	3/4	1	3	86.98
AC06252BUE67S100	SCELR402CB	5/8	2	3/4	1 1/2	3 1/2	91.98
AC06252BUEW9S100	N/A	5/8	2	3/4	1 3/4	4	112.02
AC06252BUFK9S100	SCELM402CB	5/8	2	3/4	2	4	129.98
AC06252BUGGCS100	N/A	5/8	2	3/4	2 3/8	4 5/8	134.35
AC06252BUHYES100	SCELL402CB	5/8	2	3/4	3	5	138.98
AC06252BUJ4GS100	N/A	5/8	2	3/4	3 1/2	5 1/2	150.64
AC06252BUKAIS100	SCELY402CB	5/8	2	3/4	4	6	159.98
AC06252BULGKS100	N/A	5/8	2	3/4	4 1/2	6 1/2	179.61
AC06252BUMMLS100	N/A	5/8	2	3/4	5	7	186.05
AC06252BUNUNS100	N/A	5/8	2	3/4	5 1/2	7 1/2	205.20
AC06252BUQ0PS100	N/A	5/8	2	3/4	6	8	212.86
AC07502CSFK9S100	SCELR482CB	3/4	2	1	2	4	134.98
AC07502CSGSBS100	N/A	3/4	2	1	2 1/2	4 1/2	152.42
AC07502CSHYES100	SCELM482CB	3/4	2	1	3	5	169.98
AC07502CSJ4GS100	N/A	3/4	2	1	3 1/2	5 1/2	175.35
AC07502CSKAIS100	SCELL482CB	3/4	2	1	4	6	181.98
AC07502CSLGKS100	SCELY482CB	3/4	2	1	4 1/2	6 1/2	219.98
AC07502CSMMLS100	N/A	3/4	2	1	5	7	233.77
AC07502CSNUNS100	N/A	3/4	2	1	5 1/2	7 1/2	251.82
AC07502CSQ0PS100	N/A	3/4	2	1	6	8	269.55
AC10002CSE69S100	SCELR642CB	1	2	1	1 1/2	4	198.98
AC10002DGFKBS100	N/A	1	2	1 1/4	2	4 1/2	213.40
AC10002DGGSES100	SCELM642CB	1	2	1 1/4	2 1/2	5	226.98
AC10002DGHCGS100	N/A	1	2	1 1/4	2 3/4	5 1/2	245.38
AC10002DGJ4IS100	SCELL642CB	1	2	1 1/4	3 1/2	6	262.98
AC10002DGKAKS100	N/A	1	2	1 1/4	4	6 1/2	283.44
AC10002DGLGLS100	SCELY642CB	1	2	1 1/4	4 1/2	7	299.98
AC10002DGMMS100	N/A	1	2	1 1/4	5	7 1/2	317.51
AC10002DGNUPS100	N/A	1	2	1 1/4	5 1/2	8	332.82
AC10002DGQ0QS100	N/A	1	2	1 1/4	6	8 1/2	350.55
AC10002DGR6RS100	N/A	1	2	1 1/4	6 1/2	9	377.88
AC10002DGSCSS100	N/A	1	2	1 1/4	7	9 1/2	399.32
AC10002DGTITS100	N/A	1	2	1 1/4	7 1/2	10	431.99



ALUMINUM BALL NOSE 45° HELIX END MILLS 2FL Series "BSC" End Mills HIGH PERFORMANCE END MILLS FOR ALUMINUM



NEW NUMBER	OLD #	DIA	#FL	LOC	OAL	PRICE
AC0125258000B000	BSCS082CB	1/8	2	1/4	1 1/2	19.61
AC012526W001B000	BSCR082CB	1/8	2	3/8	2	20.77
AC012528I001B000	N/A	1/8	2	1/2	2	23.74
AC0187262001B000	BSCS122CB	3/16	2	5/16	2	20.39
AC018729C001B000	BSCR122CB	3/16	2	9/16	2	21.54
AC01872A6001B000	N/A	3/16	2	5/8	2	23.34
AC025026W001B000	BSCS162CB	1/4	2	3/8	2	21.67
AC025028I001B000	N/A	1/4	2	1/2	2	23.41
AC02502A6003B000	N/A	1/4	2	5/8	2 1/2	23.75
AC02502BU003B000	BSCR162CB	1/4	2	3/4	2 1/2	24.08
AC02502CS005B000	BSCM162CB	1/4	2	1	3	36.93
AC02502DG005B000	BSCL162CB	1/4	2	1 1/4	3	37.52
AC02502E6005B000	N/A	1/4	2	1 1/2	3	47.34
AC031227Q001B000	BSCS202CB	5/16	2	7/16	2	23.43
AC031228I001B000	N/A	5/16	2	1/2	2	24.74
AC03122BU003B000	BSCR202CB	5/16	2	3/4	2 1/2	26.05
AC03122C2003B000	N/A	5/16	2	13/16	2 1/2	30.32
AC03122CS005B000	BSCM202CB	5/16	2	1	3	41.64
AC03122DG005B000	BSCL202CB	5/16	2	1 1/4	3	49.62
AC03122EW007B000	N/A	5/16	2	1 3/4	3 1/2	51.83
AC03122FW009B000	BSCX202CB	5/16	2	2 1/8	4	57.07
AC037528I001B000	BSCS242CB	3/8	2	1/2	2	27.37
AC03752BU003B000	N/A	3/8	2	3/4	2 1/2	28.46
AC03752CS003B000	BSCR242CB	3/8	2	1	2 1/2	30.24
AC03752DG005B000	BSCM242CB	3/8	2	1 1/4	3	45.54
AC03752E6007B000	BSCL242CB	3/8	2	1 1/2	3 1/2	57.64
AC03752EW007B000	N/A	3/8	2	1 3/4	3 1/2	62.35
AC03752FK009B000	N/A	3/8	2	2	4	63.60
AC03752G6009B000	N/A	3/8	2	2 1/4	4	68.77
AC03752GS00EB000	BSCX242CB	3/8	2	2 1/2	5	70.79
AC043729C004B000	BSCS282CB	7/16	2	9/16	2 3/4	43.34
AC04372BU004B000	N/A	7/16	2	3/4	2 3/4	43.33
AC04372CS004B000	BSCR282CB	7/16	2	1	2 3/4	43.32
AC04372DG007B000	N/A	7/16	2	1 1/4	3 1/2	46.88
AC04372E6007B000	N/A	7/16	2	1 1/2	3 1/2	48.74
AC04372EW009B000	N/A	7/16	2	1 3/4	4	54.26
AC04372FK009B000	BSCL282CB	7/16	2	2	4	65.97
AC04372H200EB000	N/A	7/16	2	2 5/8	5	74.23
AC05002A6003B000	BSCS322CB	1/2	2	5/8	2 1/2	44.09
AC05002CS005B000	N/A	1/2	2	1	3	47.49
AC05002DG005B000	BSCR322CB	1/2	2	1 1/4	3	51.38
AC05002E6007B000	N/A	1/2	2	1 1/2	3 1/2	56.68
AC05002EI007B000	BSCM322CB	1/2	2	1 5/8	3 1/2	62.38
AC05002EW009B000	N/A	1/2	2	1 3/4	4	68.95
AC05002FK009B000	BSCL322CB	1/2	2	2	4	77.12
AC05002G600EB000	N/A	1/2	2	2 1/4	5	79.18
AC05002GS00EB000	N/A	1/2	2	2 1/2	5	81.23
AC05002HC00EB000	N/A	1/2	2	2 3/4	5	87.37
AC05002HY00EB000	N/A	1/2	2	3	5	98.98
AC05002I800EB000	BSCX322CB	1/2	2	3 1/8	5	128.09
AC05002I100IB000	N/A	1/2	2	3 1/4	6	147.26
AC05002J400IB000	N/A	1/2	2	3 1/2	6	158.37

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HIGH PERFORMANCE
CARBIDE TOOLS



ALUMINUM BALL NOSE 45° HELIX MILLS 2FL CONTINUED

Series "BSC" End Mills

HIGH PERFORMANCE END MILLS FOR ALUMINUM

NEW NUMBER	OLD #	DIA	#FL	LOC	OAL	PRICE
AC06252BU005B000	BSCS402CB	5/8	2	3/4	3	84.25
AC06252DG007B000	N/A	5/8	2	1 1/4	3 1/2	89.02
AC06252EI007B000	BSCR402CB	5/8	2	1 5/8	3 1/2	93.25
AC06252F8009B000	N/A	5/8	2	1 7/8	4	105.30
AC06252FK009B000	BSCM402CB	5/8	2	2	4	117.78
AC06252G600EB000	N/A	5/8	2	2 1/4	5	134.98
AC06252GS00EB000	BSCL402CB	5/8	2	2 1/2	5	139.89
AC06252HC00EB000	N/A	5/8	2	2 3/4	5	151.03
AC06252J400IB000	N/A	5/8	2	3 1/2	6	169.56
AC06252JQ00IB000	BSCX402CB	5/8	2	3 3/4	6	200.68
AC06252LS00LB000	N/A	5/8	2	4 5/8	7	217.79
AC07502BU005B000	BSCS482CB	3/4	2	3/4	3	117.35
AC07502CS009B000	N/A	3/4	2	1	4	122.48
AC07502DU009B000	N/A	3/4	2	1 3/8	4	127.29
AC07502EI009B000	BSCR482CB	3/4	2	1 5/8	4	129.69
AC07502G600EB000	BSCM482CB	3/4	2	2 1/4	5	170.48
AC07502GS00EB000	N/A	3/4	2	2 1/2	5	186.09
AC07502II00IB000	BSCL482CB	3/4	2	3 1/4	6	199.24
AC07502J400IB000	N/A	3/4	2	3 1/2	6	232.62
AC07502KA00KB000	BSCX482CB	3/4	2	4	6 1/2	296.90
AC07502LG00LB000	N/A	3/4	2	4 1/2	7	326.67
AC10002CS007B000	BSCS642CB	1	2	1	3 1/2	210.91
AC10002DG009B000	N/A	1	2	1 1/4	4	219.58
AC10002E6009B000	N/A	1	2	1 1/2	4	227.41
AC10002FK00BB000	BSCR642CB	1	2	2	4 1/2	233.72
AC10002GS00EB000	N/A	1	2	2 1/2	5	242.38
AC10002H200EB000	BSCM642CB	1	2	2 5/8	5	251.88
AC10002HY00IB000	N/A	1	2	3	6	260.65
AC10002II00IB000	BSCL642CB	1	2	3 1/4	6	279.39
AC10002J400IB000	N/A	1	2	3 1/2	6	316.77
AC10002KK00LB000	BSCX642CB	1	2	4 1/8	7	412.12
AC10002LG00LB000	N/A	1	2	4 1/2	7	415.78
AC10002N800PB000	N/A	1	2	5 1/4	8	454.98
AC12502CS009B000	BSCS802CB	1 1/4	2	1	4	375.57
AC12502FK00BB000	BSCR802CB	1 1/4	2	2	4 1/2	428.99
AC12502H200GB000	BSCM802CB	1 1/4	2	2 5/8	5 1/2	498.96
AC12502II00IB000	BSCL802CB	1 1/4	2	3 1/4	6	537.08
AC12502KW00NB000	BSCX802CB	1 1/4	2	4 1/4	7 1/2	625.43
AC12502MM00NB000	N/A	1 1/4	2	5	7 1/2	682.60

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**SWIFTCARB HIGH
PERFORMANCE CARBIDE**



ALUMINUM BALL NOSE XL 45° HELIX MILLS 2FL Series "BSCCEL" End Mills HIGH PERFORMANCE END MILLS FOR ALUMINUM



**Designed for Deep Pocket, Step-Down
Machining and profiling**

NEW NUMBER	OLD #	DIA	#FL	LOC	LBS	OAL	PRICE
AC01252588I0B000	BSCELS082CB	1/8	2	1/4	1/2	1 1/2	34.90
AC0125258BU1B000	N/A	1/8	2	1/4	3/4	2	35.38
AC0125258CS1B000	BSCELR082CB	1/8	2	1/4	1	2	35.64
AC0125258DG3B000	N/A	1/8	2	1/4	1 1/4	2 1/2	37.38
AC01872628I1B000	BSCELS122CB	3/16	2	5/16	1/2	2	35.75
AC0187262BU5B000	N/A	3/16	2	5/16	3/4	3	36.61
AC0187262CS5B000	N/A	3/16	2	5/16	1	3	37.19
AC0187262DG5B000	N/A	3/16	2	5/16	1 1/4	3	37.73
AC0187262E65B000	BSCELR122CB	3/16	2	5/16	1 1/2	3	38.23
AC0187262EW5B000	N/A	3/16	2	5/16	1 3/4	3	39.58
AC025026WBU1B000	BSCELS162CB	1/4	2	3/8	3/4	2	37.87
AC025026WCS3B000	N/A	1/4	2	3/8	1	2 1/2	39.58
AC025026WDG3B000	N/A	1/4	2	3/8	1 1/4	2 1/2	40.23
AC025026WE65B000	BSCELR162CB	1/4	2	3/8	1 1/2	3	41.20
AC025026WEW5B000	N/A	1/4	2	3/8	1 3/4	3	47.49
AC025026WFK7B000	BSCELM162CB	1/4	2	3/8	2	3 1/2	53.88
AC025026WG67B000	N/A	1/4	2	3/8	2 1/4	3 1/2	56.95
AC025026WGS9B000	N/A	1/4	2	3/8	2 1/2	4	63.34
AC031227QBU1B000	N/A	5/16	2	7/16	3/4	2	39.58
AC031227QCS3B000	BSCELS202CB	5/16	2	7/16	1	2 1/2	40.68
AC031227QDG3B000	N/A	5/16	2	7/16	1 1/4	2 1/2	51.46
AC031227QE65B000	BSCELR202CB	5/16	2	7/16	1 1/2	3	61.58
AC031227QEW5B000	N/A	5/16	2	7/16	1 3/4	3	63.33
AC031227QFK7B000	BSCELM202CB	5/16	2	7/16	2	3 1/2	64.88
AC031227QG67B000	N/A	5/16	2	7/16	2 1/4	3 1/2	67.27
AC031227QGS9B000	N/A	5/16	2	7/16	2 1/2	4	73.07
AC031227QI8IB000	N/A	5/16	2	7/16	3 1/8	6	79.18
AC031227QKAIB000	N/A	5/16	2	7/16	4	6	84.13
AC037528ICS3B000	BSCELS242CB	3/8	2	1/2	1	2 1/2	54.98
AC037528IDG5B000	N/A	3/8	2	1/2	1 1/4	3	59.38
AC037528IE65B000	BSCELR242CB	3/8	2	1/2	1 1/2	3	63.78
AC037528IFK7B000	BSCELM242CB	3/8	2	1/2	2	3 1/2	65.98
AC037528IG69B000	N/A	3/8	2	1/2	2 1/4	4	69.28
AC037528IGSBB000	N/A	3/8	2	1/2	2 1/2	4 1/2	72.54
AC037528IHYEBO00	BSCCELL242CB	3/8	2	1/2	3	5	76.98
AC037528IJ4GB000	N/A	3/8	2	1/2	3 1/2	5 1/2	81.89
AC037528IJQIB000	N/A	3/8	2	1/2	3 3/4	6	84.41
AC037528IKAIB000	BSCELX242CB	3/8	2	1/2	4	6	86.88
AC043729CCS4B000	BSCELS282CB	7/16	2	9/16	1	2 3/4	65.98
AC043729CDG4B000	N/A	7/16	2	9/16	1 1/4	2 3/4	69.28
AC043729CE67B000	N/A	7/16	2	9/16	1 1/2	3 1/2	71.74
AC043729CFK9B000	BSCELM282CB	7/16	2	9/16	2	4	74.78
AC043729CGSBB000	N/A	7/16	2	9/16	2 1/2	4 1/2	86.11
AC043729CHYEBO00	BSCELX282CB	7/16	2	9/16	3	5	97.88
AC043729CJ4GB000	N/A	7/16	2	9/16	3 1/2	5 1/2	101.94
AC043729CKAIB000	N/A	7/16	2	9/16	4	6	103.92

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HIGH PERFORMANCE
CARBIDE TOOLS



BALL NOSE XL 45° HELIX ALUMINUM MILLS 2FL CONTINUED

Series "BSCCEL" End Mills
HIGH PERFORMANCE END MILLS FOR ALUMINUM



**Designed for Deep Pocket, Step-Down
Machining and profiling**

NEW NUMBER	OLD #	DIA	#FL	LOC	LBS	OAL	PRICE
AC05002A6CS5B000	BSCELS322CB	1/2	2	5/8	1	3	68.18
AC05002A6DU7B000	N/A	1/2	2	5/8	1 3/8	3 1/2	71.74
AC05002A6E67B000	BSCELR322CB	1/2	2	5/8	1 1/2	3 1/2	75.82
AC05002A6FK9B000	BSCELM322CB	1/2	2	5/8	2	4	79.18
AC05003A6G69B000	N/A	1/2	3	5/8	2 1/4	4	86.05
AC05002A6GSBB000	N/A	1/2	2	5/8	2 1/2	4 1/2	89.08
AC05002A6HYEB000	BSCCELL322CB	1/2	2	5/8	3	5	93.48
AC05002A6J4GB000	N/A	1/2	2	5/8	3 1/2	5 1/2	101.13
AC05002A6KAIB000	BSCELX322CB	1/2	2	5/8	4	6	107.78
AC05002A6LGKB000	N/A	1/2	2	5/8	4 1/2	6 1/2	118.77
AC05002A6MMLB000	N/A	1/2	2	5/8	5	7	133.39
AC06252BUCS5B000	BSCELS402CB	5/8	2	3/4	1	3	95.68
AC06252BUE67B000	BSCELR402CB	5/8	2	3/4	1 1/2	3 1/2	101.18
AC06252BUEW9B000	N/A	5/8	2	3/4	1 3/4	4	123.22
AC06252BUFK9B000	BSCELM402CB	5/8	2	3/4	2	4	142.98
AC06252BUGGCB000	N/A	5/8	2	3/4	2 3/8	4 5/8	147.78
AC06252BUHYEB000	BSCCELL402CB	5/8	2	3/4	3	5	152.88
AC06252BUJ4GB000	N/A	5/8	2	3/4	3 1/2	5 1/2	165.70
AC06252BUKAIB000	BSCELX402CB	5/8	2	3/4	4	6	175.98
AC06252BUL6IB000	N/A	5/8	2	3/4	4 3/8	6	197.57
AC06252BULGKB000	N/A	5/8	2	3/4	4 1/2	6 1/2	204.65
AC06252BUNUNB000	N/A	5/8	2	3/4	5 1/2	7 1/2	225.72
AC06252BUQ0PB000	N/A	5/8	2	3/4	6	8	234.14
AC07502CSFK9B000	BSCELR482CB	3/4	2	1	2	4	148.48
AC07502CSGSBB000	N/A	3/4	2	1	2 1/2	4 1/2	167.66
AC07502CSHYEB000	BSCELM482CB	3/4	2	1	3	5	186.98
AC07502CSJ4GB000	N/A	3/4	2	1	3 1/2	5 1/2	192.88
AC07502CSKAIB000	BSCCELL482CB	3/4	2	1	4	6	200.18
AC07502CSLGKB000	BSCELX482CB	3/4	2	1	4 1/2	6 1/2	241.98
AC07502CSMMLB000	N/A	3/4	2	1	5	7	257.14
AC07502CSNUNB000	N/A	3/4	2	1	5 1/2	7 1/2	277.00
AC07502CSQ0PB000	N/A	3/4	2	1	6	8	296.50
AC10002CSE69B000	BSCELR642CB	1	2	1	1 1/2	4	218.88
AC10002DGFKBB000	N/A	1	2	1 1/4	2	4 1/2	234.74
AC10002DGGSEB000	BSCELM642CB	1	2	1 1/4	2 1/2	5	249.68
AC10002DGHCGB000	N/A	1	2	1 1/4	2 3/4	5 1/2	269.91
AC10002DGJ4IB000	BSCCELL642CB	1	2	1 1/4	3 1/2	6	289.28
AC10002DGKAKB000	N/A	1	2	1 1/4	4	6 1/2	311.78
AC10002DGLGLB000	BSCELX642CB	1	2	1 1/4	4 1/2	7	329.98
AC10002DGMMLB000	N/A	1	2	1 1/4	5	7 1/2	349.26
AC10002DGNUPB000	N/A	1	2	1 1/4	5 1/2	8	366.10
AC10002DGQ0QB000	N/A	1	2	1 1/4	6	8 1/2	385.60
AC10002DGR6RB000	N/A	1	2	1 1/4	6 1/2	9	415.66
AC10002DGSCSB000	N/A	1	2	1 1/4	7	9 1/2	439.25
AC10002DGTITB000	N/A	1	2	1 1/4	7 1/2	10	475.18



GENERAL PURPOSE CENTER CUTTING END MILLS 2FL Series "CM" End Mills



OUR GENERAL PURPOSE END MILLS ARE MADE ON HIGH PERFORMANCE CARBIDE BLANKS AND GROUND TO TIGHT TOLERANCES

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HIGH PERFORMANCE
CARBIDE TOOLS



2FL NEW NUMBER	2FL OLD #	DIA	#FL	LOC	OAL	SHANK	PRICE	2FL TIALN COATED	COATED PRICE
GM003122I000S000	CMR022CB	1/32	2	5/64	1 1/2	1/8	14.98	GM003122I000S002	16.46
GM004623S000S000	CMR032CB	3/64	2	7/64	1 1/2	1/8	15.08	GM004623S000S002	16.56
GM006324E000S000	CMR042CB	1/16	2	3/16	1 1/2	1/8	12.82	GM003124E000S002	14.30
GM0078258000S000	CMR052CB	5/64	2	1/4	1 1/2	1/8	14.53	GM0078258000S002	16.21
GM0093258000S000	CMR062CB	3/32	2	1/4	1 1/2	1/8	12.50	GM009326W000S002	14.18
GM010926W000S000	CMR072CB	7/64	2	3/8	1 1/2	1/8	14.17	GM010926W000S002	15.85
GM012528I000S000	CMR082CB	1/8	2	1/2	1 1/2	1/8	11.29	GM012548I000S002	12.97
GM014029C001S000	CMR092CB	9/64	2	9/16	2	3/16	17.03	GM014029C001S002	19.18
GM015629C001S000	CMR102CB	5/32	2	9/16	2	3/16	16.77	GM015629C001S000	18.92
GM01722A6001S000	CMR112CB	11/64	2	5/8	2	3/16	17.09	GM01722A6001S002	19.18
GM01872A6001S000	CMR122CB	3/16	2	5/8	2	3/16	14.40	GM01872A6001S002	16.61
GM02032A6003S000	CMR132CB	13/64	2	5/8	2 1/2	1/4	17.33	GM02032A6003S002	20.65
GM02182A6003S000	CMR142CB	7/32	2	5/8	2 1/2	1/4	17.75	GM02182A6003S002	21.07
GM02342BU003S000	CMR152CB	15/64	2	3/4	2 1/2	1/4	17.33	GM02342BU003S002	20.65
GM02502BU003S000	CMR162CB	1/4	2	3/4	2 1/2	1/4	12.92	GM02502BU003S002	16.24
GM02652BU003S000	CMR172CB	17/64	2	3/4	2 1/2	5/16	20.69	GM02652BU003S002	24.01
GM02812BU003S000	CMR182CB	9/32	2	3/4	2 1/2	5/16	20.69	GM02812BU003S002	24.01
GM02972C2003S000	CMR192CB	19/64	2	13/16	2 1/2	5/16	21.53	GM02972C2003S002	24.85
GM03122C2003S000	CMR202CB	5/16	2	13/16	2 1/2	5/16	20.18	GM03122C2003S002	23.50
GM03282CA003S000	CMR212CB	21/64	2	7/8	2 1/2	3/8	27.26	GM03282CA003S002	32.02
GM03432CS003S000	CMR222CB	11/32	2	1	2 1/2	3/8	26.42	GM03432CS003S002	30.81
GM03592CA003S000	CMR232CB	23/64	2	7/8	2 1/2	3/8	27.26	GM03592CA003S002	31.65
GM03752CS003S000	CMR242CB	3/8	2	1	2 1/2	3/8	25.25	GM03752CS003S002	29.64
GM03912CA003S000	CMR252CB	25/64	2	7/8	2 1/2	7/16	39.14	GM03912CA003S002	44.99
GM04062CS004S000	CMR262CB	13/32	2	1	2 3/4	7/16	37.40	GM04062CS004S002	43.25
GM04222CA003S000	CMR272CB	27/64	2	7/8	2 1/2	7/16	39.14	GM04222CA003S002	44.99
GM04372CS004S000	CMR282CB	7/16	2	1	2 3/4	7/16	27.91	GM04372CS004S002	33.76
GM04532CS005S000	CMR292CB	29/64	2	1	3	1/2	46.55	GM04532CS005S002	54.65
GM04682DG005S000	CMR302CB	15/32	2	1 1/4	3	1/2	44.98	GM04682DG005S002	53.08
GM04842CS005S000	CMR312CB	31/64	2	1	3	1/2	46.55	GM04842CS005S002	54.65
GM05002CS005S000	CMR322CB	1/2	2	1	3	1/2	33.07	GM05002CS005S002	41.17
GM05622DG005S000	CMR362CB	9/16	2	1 1/4	3	9/16	66.65	GM05622DG005S002	76.06
GM06252DG007S000	CMR402CB	5/8	2	1 1/4	3 1/2	5/8	63.48	GM06252DG007S002	72.89
GM07502E6009S000	CMR482CB	3/4	2	1 1/2	4	3/4	90.45	GM07502E6009S002	104.32
GM08752E6009S000	CMR562CB	7/8	2	1 1/2	4	7/8	137.95	GM08752E6009S002	155.12
GM10002E6009S000	CMR642CB	1	2	1 1/2	4	1	141.53	GM10002E6009S002	161.98
GM12502E6009S000	CMR802CB	1 1/4	2	1 1/2	4	1 1/4	447.79	GM12502E6009S002	473.20



GENERAL PURPOSE CENTER CUTTING END MILLS 4FL Series "CM" End Mills



OUR GENERAL PURPOSE END MILLS ARE MADE ON HIGH PERFORMANCE CARBIDE BLANKS AND GROUND TO TIGHT TOLERANCES

4FL NEW NUMBER	4FL OLD #	DIA	#FL	LOC	OAL	SHANK	PRICE	4FL TIALN COATED	COATED PRICE
GM003144E000S000	CMR044CB	1/16	2	3/16	1 1/2	1/8	12.82	GM003144E000S002	14.30
GM007848I000S000	CMR054CB	5/64	2	1/4	1 1/2	1/8	14.53	GM007848I000S002	16.21
GM009346W000S000	CMR064CB	3/32	2	1/4	1 1/2	1/8	12.50	GM009346W000S002	14.18
GM010946W000S000	CMR074CB	7/64	2	3/8	1 1/2	1/8	14.17	GM010946W000S002	15.85
GM012548I000S000	CMR084CB	1/8	2	1/2	1 1/2	1/8	11.29	GM012548I000S002	12.97
GM014049C001S000	CMR094CB	9/64	2	9/16	2	3/16	17.03	GM014049C001S002	19.18
GM015649C001S000	CMR104CB	5/32	2	9/16	2	3/16	16.77	GM015649C001S002	18.92
GM01724A6001S000	CMR114CB	11/64	2	5/8	2	3/16	17.09	GM01724A6001S002	19.18
GM01874A6001S000	CMR124CB	3/16	2	5/8	2	3/16	14.40	GM01874A6001S002	16.61
GM02034A6003S000	CMR134CB	13/64	2	5/8	2 1/2	1/4	17.33	GM02034A6003S002	20.65
GM02184A6003S000	CMR144CB	7/32	2	5/8	2 1/2	1/4	17.75	GM02184A6003S002	21.07
GM02344BU003S000	CMR154CB	15/64	2	3/4	2 1/2	1/4	17.33	GM02344BU003S002	20.65
GM02504BU003S000	CMR164CB	1/4	2	3/4	2 1/2	1/4	12.92	GM02504BU003S002	16.24
GM02654BU003S000	CMR174CB	17/64	2	3/4	2 1/2	5/16	20.69	GM02654BU003S002	24.01
GM02814BU003S000	CMR184CB	9/32	2	3/4	2 1/2	5/16	20.69	GM02814BU003S002	24.01
GM02974C2003S000	CMR194CB	19/64	2	13/16	2 1/2	5/16	21.53	GM02974C2003S002	24.85
GM03124C2003S000	CMR204CB	5/16	2	13/16	2 1/2	5/16	20.18	GM03124C2003S002	23.50
GM03284CA003S000	CMR214CB	21/64	2	7/8	2 1/2	3/8	27.26	GM03284CA003S002	32.02
GM03434CS003S000	CMR224CB	11/32	2	1	2 1/2	3/8	26.42	GM03434CS003S002	30.81
GM03594CA003S000	CMR234CB	23/64	2	7/8	2 1/2	3/8	27.26	GM03594CA003S002	31.65
GM03754CS003S000	CMR244CB	3/8	2	1	2 1/2	3/8	25.25	GM03754CS003S002	29.64
GM03914CA003S000	CMR254CB	25/64	2	7/8	2 1/2	7/16	39.14	GM03914CA003S002	44.99
GM04064CS004S000	CMR264CB	13/32	2	1	2 3/4	7/16	37.40	GM04064CS004S002	43.25
GM04224CA003S000	CMR274CB	27/64	2	7/8	2 1/2	7/16	39.14	GM04224CA003S002	44.99
GM04374CS004S000	CMR284CB	7/16	2	1	2 3/4	7/16	27.91	GM04374CS004S002	33.76
GM04534CS005S000	CMR294CB	29/64	2	1	3	1/2	46.55	GM04534CS005S002	54.65
GM04684DG005S000	CMR304CB	15/32	2	1 1/4	3	1/2	44.98	GM04684DG005S002	53.08
GM04844CS005S000	CMR314CB	31/64	2	1	3	1/2	46.55	GM04844CS005S002	54.65
GM05004CS005S000	CMR324CB	1/2	2	1	3	1/2	33.07	GM05004CS005S002	41.17
GM05624DG005S000	CMR364CB	9/16	2	1 1/4	3	9/16	66.65	GM05624DG005S002	76.06
GM06254DG007S000	CMR404CB	5/8	2	1 1/4	3 1/2	5/8	63.48	GM06254DG007S002	72.89
GM07504E6009S000	CMR484CB	3/4	2	1 1/2	4	3/4	90.45	GM07504E6009S002	104.32
GM08754E6009S000	CMR564CB	7/8	2	1 1/2	4	7/8	137.95	GM08754E6009S002	155.12
GM10004E6009S000	CMR644CB	1	2	1 1/2	4	1	141.53	GM10004E6009S002	161.98
GM12504E6009S000	CMR804CB	1 1/4	2	1 1/2	4	1 1/4	447.79	GM12504E6009S002	473.20



XL GENERAL PURPOSE CENTER CUTTING END MILLS Series "CML" & "CMX" End Mills

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HIGH PERFORMANCE
CARBIDE TOOLS



2FL NEW NUMBER	OLD #	DIA	FLUTES	LOC	OAL	SHANK	PRICE	4FL TIALN COATED	COATED PRICE
GM01252BU002S000	CML082CB	1/8	2	3/4	2 1/4	1/8	15.51	GM01252BU002S002	20.18
GM01872BU003S000	CML122CB	3/16	2	3/4	2 1/2	3/16	14.27	GM01872BU003S002	20.23
GM02502D4005S000	CML162CB	1/4	2	1 1/8	3	1/4	17.68	GM02502D4005S002	29.89
GM03122D4005S000	CML202CB	5/16	2	1 1/8	3	5/16	21.92	GM03122D4005S002	34.12
GM03752D4005S000	CML242CB	3/8	2	1 1/8	3	3/8	27.71	GM03752D4005S002	45.93
GM04372FK009S000	CML282CB	7/16	2	2	4	7/16	41.87	GM04372FK009S002	71.12
GM05002FK009S000	CML322CB	1/2	2	2	4	1/2	44.56	GM05002FK009S002	73.81
GM06252G600CS000	CML402CB	5/8	2	2 1/4	4 5/8	5/8	93.56	GM06252G600CS002	126.19
GM07502G600ES000	CML482CB	3/4	2	2 1/4	5	3/4	120.96	GM07502G600ES002	168.21
GM08752G600ES000	CML562CB	7/8	2	2 1/4	5	7/8	228.00	GM08752G600ES002	284.25
GM10002G600ES000	CML642CB	1	2	2 1/4	5	1	234.48	GM10002G600ES002	299.73



2FL NEW NUMBER	OLD #	DIA	FLUTES	LOC	OAL	PRICE	2FL TIALN COAT	COATED PRICE
GM01252CS005S000	CMX082CB	1/8	2	1	3	23.85	GM01252CS005S002	25.53
GM01872D4003S000	CMX122CB	3/16	2	1 1/8	2 1/2	25.43	GM01872D4003S002	27.58
GM02502E6003S000	CMX162CB	1/4	2	1 1/2	2 1/2	27.24	GM02502E6003S002	31.63
GM03122E1007S000	CMX202CB	5/16	2	1 5/8	3 1/2	29.94	GM03122E1007S002	36.50
GM03752EW007S000	CMX242CB	3/8	2	1 3/4	3 1/2	31.98	GM03752EW007S002	38.54
GM04372FK009S000	CMX282CB	7/16	2	2	4	56.69	GM04372FK009S002	67.22
GM05002HY00ES000	CMX322CB	1/2	2	3	5	64.31	GM05002HY00ES002	76.82
GM06252HY00ES000	CMX402CB	5/8	2	3	5	95.20	GM06252HY00ES002	109.89
GM07502HY00IS000	CMX482CB	3/4	2	3	6	151.54	GM07502HY00IS002	171.68
GM08752HY00IS000	CMX562CB	7/8	2	3	6	197.27	GM08752HY00IS002	220.46
GM10002HY00IS000	CMX642CB	1	2	3	6	252.20	GM10002HY00IS002	278.42



4FL NEW NUMBER	OLD #	DIA	FLUTES	LOC	OAL	SHANK	PRICE	4FL TIALN COATED	COATED PRICE
GM01254BU002S000	CML084CB	1/8	2	3/4	2 1/4	1/8	15.51	GM01254BU002S002	20.18
GM01874BU003S000	CML124CB	3/16	2	3/4	2 1/2	3/16	14.27	GM01874BU003S002	20.23
GM02504D4005S000	CML164CB	1/4	2	1 1/8	3	1/4	17.68	GM02504D4005S002	29.89
GM03124D4005S000	CML204CB	5/16	2	1 1/8	3	5/16	21.92	GM03124D4005S002	34.12
GM03754D4005S000	CML244CB	3/8	2	1 1/8	3	3/8	27.71	GM03754D4005S002	45.93
GM04374FK009S000	CML284CB	7/16	2	2	4	7/16	41.87	GM04374FK009S002	71.12
GM05004FK009S000	CML324CB	1/2	2	2	4	1/2	44.56	GM05004FK009S002	73.81
GM06254G600CS000	CML404CB	5/8	2	2 1/4	4 5/8	5/8	93.56	GM06254G600CS002	126.19
GM07504G600ES000	CML484CB	3/4	2	2 1/4	5	3/4	120.96	GM07504G600ES002	168.21
GM08754G600ES000	CML564CB	7/8	2	2 1/4	5	7/8	228.00	GM08754G600ES002	284.25
GM10004G600ES000	CML644CB	1	2	2 1/4	5	1	234.48	GM10004G600ES002	299.73



4FL NEW NUMBER	OLD #	DIA	FLUTES	LOC	OAL	PRICE	4FL TIALN COAT	COATED PRICE
GM01254CS005S000	CMX084CB	1/8	4	1	3	23.85	GM01254CS005S002	25.53
GM01874D4003S000	CMX124CB	3/16	4	1 1/8	2 1/2	25.43	GM01874D4003S002	27.58
GM02504E6006S000	CMX164CB	1/4	4	1 1/2	3 1/4	27.24	GM02504E6006S002	31.63
GM03124E1007S000	CMX204CB	5/16	4	1 5/8	3 1/2	29.94	GM03124E1007S002	36.50
GM03754EW007S000	CMX244CB	3/8	4	1 3/4	3 1/2	31.98	GM03754EW007S002	38.54
GM04374FK009S000	CMX284CB	7/16	4	2	4	56.69	GM04374FK009S002	67.22
GM05004HY00ES000	CMX324CB	1/2	4	3	5	64.31	GM05004HY00ES002	76.82
GM06254HY00ES000	CMX404CB	5/8	4	3	5	95.20	GM06254HY00ES002	109.89
GM07504HY00IS000	CMX484CB	3/4	4	3	6	151.54	GM07504HY00IS002	171.68
GM08754HY00IS000	CMX564CB	7/8	4	3	6	197.27	GM08754HY00IS002	220.46
GM10004HY00IS000	CMX644CB	1	4	3	6	252.20	GM10004HY00IS002	278.42



Swift-CARB^{CNC}™

EXTENDED LENGTH GENERAL PURPOSE CENTER CUTTING END MILLS Series "CME" End Mills



2FL NEW NUMBER	2FL OLD #	DIA	LOC	OAL	SHANK	PRICE	4FL NEW NUMBER	4FL OLD #	PRICE
GM025028I005S000	CMER162CB	1/4	1/2	3	1/4	20.08	GM025048I005S000	CMER164CB	20.08
GM025028I007S000	CMEM162CB	1/4	1/2	3 1/2	1/4	22.61	GM025048I007S000	CMEM164CB	22.61
GM02502BU009S000	CMEL162CB	1/4	3/4	4	1/4	22.95	GM02504BU009S000	CMEL164CB	22.95
GM02502CS00IS000	CMEX162CB	1/4	1	6	1/4	28.67	GM02504CS00IS000	CMEX164CB	28.67
GM031228I005S000	CMER202CB	5/16	1/2	3	5/16	24.78	GM031248I005S000	CMER204CB	24.78
GM031228I007S000	CMEM202CB	5/16	1/2	3 1/2	5/16	26.43	GM031248I007S000	CMEM204CB	26.43
GM03122BU009S000	CMEL202CB	5/16	3/4	4	5/16	27.67	GM03124BU009S000	CMEL204CB	27.67
GM03122CS00IS000	CMEX202CB	5/16	1	6	5/16	41.02	GM03124CS00IS000	CMEX204CB	41.02
GM037528I005S000	CMER242CB	3/8	1/2	3	3/8	30.61	GM037548I005S000	CMER244CB	30.61
GM03752BU009S000	CMEM242CB	3/8	3/4	4	3/8	34.06	GM03754BU009S000	CMEM244CB	34.06
GM03752CS00ES000	CMEL242CB	3/8	1	5	3/8	37.93	GM03754CS00ES000	CMEL244CB	37.93
GM03752E600IS000	CMEX242CB	3/8	1 1/2	6	3/8	44.61	GM03754E600IS000	CMEX244CB	44.61
GM043728I004S000	CMER282CB	7/16	1/2	2 3/4	7/16	39.41	GM043748I004S000	CMER284CB	39.41
GM04372BU009S000	CMEM282CB	7/16	3/4	4	7/16	42.12	GM04374BU009S000	CMEM284CB	42.12
GM04372CS00IS000	CMEL282CB	7/16	1	6	7/16	37.93	GM04374CS00IS000	CMEL284CB	37.93
GM04372CS00IS000	CMEX282CB	7/16	1	6	7/16	56.01	GM04374CS00IS000	CMEX284CB	56.01
GM050028I005S000	CMER322CB	1/2	1/2	3	1/2	40.25	GM050048I005S000	CMER324CB	40.25
GM05002BU009S000	CMEM322CB	1/2	3/4	4	1/2	44.82	GM05004BU009S000	CMEM324CB	44.82
GM05002CS00ES000	CMEL322CB	1/2	1	5	1/2	59.55	GM05004CS00ES000	CMEL324CB	59.55
GM05002E600IS000	CMEX322CB	1/2	1 1/2	6	1/2	64.80	GM05004E600IS000	CMEX324CB	64.80
GM05622BU009S000	CMEM362CB	9/16	3/4	4	9/16	67.82	GM05624BU009S000	CMEM364CB	67.82
GM05622E600IS000	CMEX362CB	9/16	1 1/2	6	9/16	85.07	GM05624E600IS000	CMEX364CB	85.07
GM06252BU009S000	CMEM402CB	5/8	3/4	4	5/8	78.42	GM06254BU009S000	CMEM404CB	78.42
GM06252CS00ES000	CMEL402CB	5/8	1	5	5/8	86.83	GM06254CS00ES000	CMEL404CB	86.83
GM06252E600IS000	CMEX402CB	5/8	1 1/2	6	5/8	92.37	GM06254E600IS000	CMEX404CB	92.37
GM07502CS009S000	CMEM482CB	3/4	1	4	3/4	113.83	GM07504CS009S000	CMEM484CB	113.83
GM07502DG00ES000	CMEL482CB	3/4	1 1/4	5	3/4	137.51	GM07504DG00ES000	CMEL484CB	137.51
GM07502E600IS000	CMEX482CB	3/4	1 1/2	6	3/4	147.13	GM07504E600IS000	CMEX484CB	147.13
GM08752CS009S000	CMEM562CB	7/8	1	4	7/8	182.82	GM08754CS009S000	CMEM564CB	182.82
GM08752E600IS000	CMEX562CB	7/8	1 1/2	6	7/8	205.83	GM08754E600IS000	CMEX564CB	205.83
GM10002DG00ES000	CMEM642CB	1	1 1/4	5	1	194.30	GM10004DG00ES000	CMEM644CB	194.30
GM10002E600IS000	CMEL642CB	1	1 1/2	6	1	216.64	GM10004E600IS000	CMEL644CB	216.64
GM10002FK00LS000	CMEX642CB	1	2	7	1	227.70	GM10004FK00LS000	CMEX644CB	227.70
GM12502DG00GS000	CMEM802CB	1 1/4	1 1/4	5 1/2	1 1/4	469.20	GM12504DG00GS000	CMEM804CB	469.20
GM12502E600IS000	CMEL802CB	1 1/4	1 1/2	6	1 1/4	482.98	GM12504E600IS000	CMEL804CB	482.98
GM12502FK00NS000	CMEX802CB	1 1/4	2	7 1/2	1 1/4	500.45	GM12504FK00NS000	CMEX804CB	500.45

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SWIFTCARB HIGH
PERFORMANCE CARBIDE



BALL END GENERAL PURPOSE CENTER CUTTING END MILLS 2FL Series "BM" End Mills



OUR GENERAL PURPOSE END MILLS ARE MADE ON HIGH PERFORMANCE CARBIDE BLANKS AND GROUND TO TIGHT TOLERANCES

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HIGH PERFORMANCE
CARBIDE TOOLS



NEW NUMBER	OLD #	DIA	FLUTES	LOC	OAL	SHANK	PRICE	TIALN COATED	COATED PRICE
GM006324E000B000	BMR042CB	1/16	2	3/16	1 1/2	1/8	14.11	GM006324E000B002	15.58
GM007824E000B000	BMR052CB	5/64	2	3/16	1 1/2	1/8	15.99	GM007824E000B002	17.67
GM009424E000B000	BMR062CB	3/32	2	3/16	1 1/2	1/8	13.75	GM009424E000B002	15.43
GM010924E000B000	BMR072CB	7/64	2	3/16	1 1/2	1/8	15.59	GM010924E000B002	17.27
GM012528I000B000	BMR082CB	1/8	2	1/2	1 1/2	1/8	12.42	GM012528I000B002	14.10
GM014129C001B000	BMR092CB	9/64	2	9/16	2	3/16	18.73	GM014129C001B002	20.88
GM015629C001B000	BMR102CB	5/32	2	9/16	2	3/16	18.45	GM015629C001B002	20.60
GM01722A6001B000	BMR112CB	11/64	2	5/8	2	3/16	18.73	GM01722A6001B002	20.88
GM01872A6001B000	BMR122CB	3/16	2	5/8	2	3/16	15.91	GM01872A6001B002	18.06
GM02032A6003B000	BMR132CB	13/64	2	5/8	2 1/2	1/4	19.07	GM02032A6003B002	22.39
GM02182A6003B000	BMR142CB	7/32	2	5/8	2 1/2	1/4	19.53	GM02182A6003B002	22.85
GM02342BU003B000	BMR152CB	15/64	2	3/4	2 1/2	1/4	19.07	GM02342BU003B002	22.39
GM02502BU003B000	BMR162CB	1/4	2	3/4	2 1/2	1/4	14.22	GM02502BU003B002	17.54
GM02652BU003B000	BMR172CB	17/64	2	3/4	2 1/2	5/16	22.76	GM02652BU003B002	26.08
GM02812BU003B000	BMR182CB	9/32	2	3/4	2 1/2	5/16	22.76	GM02812BU003B002	26.08
GM02962C2003B000	BMR192CB	19/64	2	13/16	2 1/2	5/16	23.68	GM02962C2003B002	27.00
GM03122C2003B000	BMR202CB	5/16	2	13/16	2 1/2	5/16	22.19	GM03122C2003B002	25.52
GM03282CA003B000	BMR212CB	21/64	2	7/8	2 1/2	3/8	29.98	GM03282CA003B002	34.74
GM03432CA003B000	BMR222CB	11/32	2	7/8	2 1/2	3/8	29.06	GM03432CA003B002	33.45
GM03592CA003B000	BMR232CB	23/64	2	7/8	2 1/2	3/8	29.98	GM03592CA003B002	34.48
GM03752CS003B000	BMR242CB	3/8	2	1	2 1/2	3/8	27.77	GM03752CS003B002	32.17
GM03912CA003B000	BMR252CB	25/64	2	7/8	2 1/2	7/16	43.05	GM03912CA003B002	48.90
GM04062CA004B000	BMR262CB	13/32	2	7/8	2 3/4	7/16	41.14	GM04062CA004B002	46.99
GM04212CA003B000	BMR272CB	27/64	2	7/8	2 1/2	7/16	43.05	GM04212CA003B002	48.90
GM04372CS004B000	BMR282CB	7/16	2	1	2 3/4	7/16	30.70	GM04372CS004B002	36.55
GM04532CS005B000	BMR292CB	29/64	2	1	3	1/2	51.20	GM04532CS005B002	59.30
GM04682DG005B000	BMR302CB	15/32	2	1 1/4	3	1/2	49.47	GM04682DG005B002	57.57
GM04842CS005B000	BMR312CB	31/64	2	1	3	1/2	51.20	GM04842CS005B002	59.30
GM05002CS005B000	BMR322CB	1/2	2	1	3	1/2	36.38	GM05002CS005B002	44.48
GM05622DG005B000	BMR362CB	9/16	2	1 1/4	3	9/16	73.31	GM05622DG005B002	82.73
GM06252DG007B000	BMR402CB	5/8	2	1 1/4	3 1/2	5/8	69.82	GM06252DG007B002	79.24
GM07502E6009B000	BMR482CB	3/4	2	1 1/2	4	3/4	99.49	GM07502E6009B002	113.36
GM08752E6009B000	BMR562CB	7/8	2	1 1/2	4	7/8	151.74	GM08752E6009B002	168.91
GM10002E6009B000	BMR642CB	1	2	1 1/2	4	1	155.68	GM10002E6009B002	176.13



BALL END GENERAL PURPOSE CENTER CUTTING END MILLS 4FL Series "BM" End Mills



OUR GENERAL PURPOSE END MILLS ARE MADE ON HIGH PERFORMANCE CARBIDE BLANKS AND GROUND TO TIGHT TOLERANCES

NEW NUMBER	OLD #	DIA	FLUTES	LOC	OAL	SHANK	PRICE	TIALN COATED	COATED PRICE
GM006344E000B000	BMR044CB	1/16	4	3/16	1 1/2	1/8	14.11	GM006344E000B002	15.58
GM007844E000B000	BMR054CB	5/64	4	3/16	1 1/2	1/8	15.99	GM007844E000B002	17.67
GM009444E000B000	BMR064CB	3/32	4	3/16	1 1/2	1/8	13.75	GM009444E000B002	15.43
GM010944E000B000	BMR074CB	7/64	4	3/16	1 1/2	1/8	15.59	GM010944E000B002	17.27
GM012548I000B000	BMR084CB	1/8	4	1/2	1 1/2	1/8	12.42	GM012548I000B002	14.10
GM014149C001B000	BMR094CB	9/64	4	9/16	2	3/16	18.73	GM014149C001B002	20.88
GM015649C001B000	BMR104CB	5/32	4	9/16	2	3/16	18.45	GM015649C001B002	20.60
GM01724A6001B000	BMR114CB	11/64	4	5/8	2	3/16	18.73	GM01724A6001B002	20.88
GM01874A6001B000	BMR124CB	3/16	4	5/8	2	3/16	15.91	GM01874A6001B002	18.06
GM02034A6003B000	BMR134CB	13/64	4	5/8	2 1/2	1/4	19.07	GM02034A6003B002	22.39
GM02184A6003B000	BMR144CB	7/32	4	5/8	2 1/2	1/4	19.53	GM02184A6003B002	22.85
GM02344BU003B000	BMR154CB	15/64	4	3/4	2 1/2	1/4	19.07	GM02344BU003B002	22.39
GM02504BU003B000	BMR164CB	1/4	4	3/4	2 1/2	1/4	14.22	GM02504BU003B002	17.54
GM02654BU003B000	BMR174CB	17/64	4	3/4	2 1/2	5/16	22.76	GM02654BU003B002	26.08
GM02814BU003B000	BMR184CB	9/32	4	3/4	2 1/2	5/16	22.76	GM02814BU003B002	26.08
GM02964C2003B000	BMR194CB	19/64	4	13/16	2 1/2	5/16	23.68	GM02964C2003B002	27.00
GM03124C2003B000	BMR204CB	5/16	4	13/16	2 1/2	5/16	22.19	GM03124C2003B002	25.52
GM03284CA003B000	BMR214CB	21/64	4	7/8	2 1/2	3/8	29.98	GM03284CA003B002	34.74
GM03434CA003B000	BMR224CB	11/32	4	7/8	2 1/2	3/8	29.06	GM03434CA003B002	33.45
GM03594CA003B000	BMR234CB	23/64	4	7/8	2 1/2	3/8	29.98	GM03594CA003B002	34.48
GM03754CS003B000	BMR244CB	3/8	4	1	2 1/2	3/8	27.77	GM03754CS003B002	32.17
GM03914CA003B000	BMR254CB	25/64	4	7/8	2 1/2	7/16	43.05	GM03914CA003B002	48.90
GM04064CA004B000	BMR264CB	13/32	4	7/8	2 3/4	7/16	41.14	GM04064CA004B002	46.99
GM04214CA003B000	BMR274CB	27/64	4	7/8	2 1/2	7/16	43.05	GM04214CA003B002	48.90
GM04374CS004B000	BMR284CB	7/16	4	1	2 3/4	7/16	30.70	GM04374CS004B002	36.55
GM04534CS005B000	BMR294CB	29/64	4	1	3	1/2	51.20	GM04534CS005B002	59.30
GM04684DG005B000	BMR304CB	15/32	4	1 1/4	3	1/2	49.47	GM04684DG005B002	57.57
GM04844CS005B000	BMR314CB	31/64	4	1	3	1/2	51.20	GM04844CS005B002	59.30
GM05004CS005B000	BMR324CB	1/2	4	1	3	1/2	36.38	GM05004CS005B002	44.48
GM05624DG005B000	BMR364CB	9/16	4	1 1/4	3	9/16	73.31	GM05624DG005B002	82.73
GM06254DG007B000	BMR404CB	5/8	4	1 1/4	3 1/2	5/8	69.82	GM06254DG007B002	79.24
GM07504E6009B000	BMR484CB	3/4	4	1 1/2	4	3/4	99.49	GM07504E6009B002	113.36
GM08754E6009B000	BMR564CB	7/8	4	1 1/2	4	7/8	151.74	GM08754E6009B002	168.91
GM10004E6009B000	BMR644CB	1	4	1 1/2	4	1	155.68	GM10004E6009B002	176.13



EXL GENERAL PURPOSE CENTER CUTTING END MILLS Series "BME" End Mills



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HIGH PERFORMANCE
CARBIDE TOOLS



2FL NEW NUMBER	2FL OLD #	DIA	LOC	OAL	SHANK	PRICE	4FL NEW NUMBER	4FL OLD #	PRICE
GM025028I005B000	BMER162CB	1/4	1/2	3	1/4	26.98	GM025048I005B000	BMER164CB	26.98
GM025028I007B000	BMEM162CB	1/4	1/2	3 1/2	1/4	29.51	GM025048I007B000	BMEM164CB	29.51
GM025028I007B000	BMEL162CB	1/4	3/4	4	1/4	29.85	GM025048I007B000	BMEL164CB	29.85
GM02502CS00IB000	BMEX162CB	1/4	1	6	1/4	35.57	GM02504CS00IB000	BMEX164CB	35.57
GM031228I005B000	BMER202CB	5/16	1/2	3	5/16	31.68	GM031248I005B000	BMER204CB	31.68
GM031228I007B000	BMEM202CB	5/16	1/2	3 1/2	5/16	33.33	GM031248I007B000	BMEM204CB	33.33
GM03122BU009B000	BMEL202CB	5/16	3/4	4	5/16	34.57	GM03124BU009B000	BMEL204CB	34.57
GM03122CS00IB000	BMEX202CB	5/16	1	6	5/16	47.92	GM03124CS00IB000	BMEX204CB	47.92
GM037528I007B000	BMER242CB	3/8	1/2	3	3/8	38.66	GM037528I005B000	BMES242CB	38.66
GM03752CS00EB000	BMEL242CB	3/8	1	5	3/8	45.98	GM03754CS00EB000	BMEL244CB	45.98
GM03752E600IB000	BMEX242CB	3/8	1 1/2	6	3/8	52.66	GM03754E600IB000	BMEX244CB	52.66
GM043728I004B000	BMER282CB	7/16	1/2	2 3/4	7/16	48.61	GM043748I004B000	BMER284CB	48.61
GM04372BU009B000	BMEM282CB	7/16	3/4	4	7/16	51.32	GM04374BU009B000	BMEM284CB	51.32
GM050028I005B000	BMER322CB	1/2	1/2	3	1/2	49.45	GM050048I005B000	BMER324CB	49.45
GM05002BU009B000	BMEM322CB	1/2	3/4	4	1/2	54.02	GM05004BU009B000	BMEM324CB	54.02
GM05002CS00EB000	BMEL322CB	1/2	1	5	1/2	68.75	GM05004CS00EB000	BMEL324CB	68.75
GM05002E600IB000	BMEX322CB	1/2	1 1/2	6	1/2	74.00	GM05004E600IB000	BMEX324CB	74.00
GM05622BU009B000	BMEM362CB	9/16	3/4	4	9/16	81.62	GM05624BU009B000	BMEM364CB	81.62
GM05622E600IB000	BMEX362CB	9/16	1 1/2	6	9/16	98.87	GM05624E600IB000	BMEX364CB	98.87
GM06252BU009B000	BMEM402CB	5/8	3/4	4	5/8	95.67	GM06254BU009B000	BMEM404CB	95.67
GM06252CS00EB000	BMEL402CB	5/8	1	5	5/8	104.08	GM06254CS00EB000	BMEL404CB	104.08
GM06252E600IB000	BMEX402CB	5/8	1 1/2	6	5/8	109.62	GM06254E600IB000	BMEX404CB	109.62
GM07502CS009B000	BMEM482CB	3/4	1	4	3/4	142.58	GM07504CS009B000	BMEM484CB	142.58
GM07502DG00EB000	BMEL482CB	3/4	1 1/4	5	3/4	166.26	GM07504DG00EB000	BMEL484CB	166.26
GM07502E600IB000	BMEX482CB	3/4	1 1/2	6	3/4	175.88	GM07504E600IB000	BMEX484CB	175.88
GM08752CS009B000	BMEM562CB	7/8	1	4	7/8	223.07	GM08754CS009B000	BMEM564CB	223.07
GM08752E600IB000	BMEX562CB	7/8	1 1/2	6	7/8	246.08	GM08754E600IB000	BMEX564CB	246.08
GM10002DG00EB000	BMEM642CB	1	1 1/4	5	1	240.30	GM10004DG00EB000	BMEM644CB	240.30
GM10002E600IB000	BMEL642CB	1	1 1/2	6	1	262.64	GM10004E600IB000	BMEL644CB	262.64
GM10002FK00LB000	BMEX642CB	1	2	7	1	273.70	GM10004FK00LB000	BMEX644CB	273.70
GM12502DG00GB000	BMEM802CB	1 1/4	1 1/4	5 1/2	1 1/4	547.40	GM12504DG00GB000	BMEM804CB	547.40
GM12502E600IB000	BMEL802CB	1 1/4	1 1/2	6	1 1/4	561.18	GM12504E600IB000	BMEL804CB	561.18
GM12502FK00NB000	BMEX802CB	1 1/4	2	7 1/2	1 1/4	578.65	GM12504FK00NB000	BMEX804CB	578.65



DOUBLE END

GENERAL PURPOSE CENTER CUTTING END MILLS 2FL & 4FL

Series "CSD" & "CMD" End Mills

OUR GENERAL PURPOSE END MILLS ARE MADE ON HIGH PERFORMANCE CARBIDE BLANKS AND GROUND TO TIGHT TOLERANCES



2FL PART #	DIA	LOC	OAL	SHANK	PRICE	4FL PART #	PRICE
CSD042CB	1/16	1/8	1 1/2	1/8	16.76	CSD044CB	16.76
CSD062CB	3/32	3/16	1 1/2	1/8	17.87	CSD064CB	17.87
CSD082CB	1/8	1/4	1 1/2	1/8	16.76	CSD084CB	16.76
CSD102CB	5/32	5/16	2	3/16	21.03	CSD104CB	21.03
CSD122CB	3/16	3/8	2	3/16	19.56	CSD124CB	19.56
CSD142CB	7/32	1/2	2 1/2	1/4	22.08	CSD144CB	22.08
CSD162CB	1/4	1/2	3	1/4	20.79	CSD164CB	20.79
CSD202CB	5/16	1/2	3	5/16	25.88	CSD204CB	25.88
CSD242CB	3/8	9/16	3	3/8	27.57	CSD244CB	27.57
CSD282CB	7/16	9/16	3	7/16	39.37	CSD284CB	39.37
CSD322CB	1/2	5/8	3	1/2	46.81	CSD324CB	46.81



2FL PART #	DIA	FLUTES	LOC	OAL	SHANK	PRICE	4FL PART #	PRICE
CMD082CB	1/8	2	3/8	3	3/8	33.99	CMD084CB	33.99
CMD102CB	5/32	2	7/16	3 1/2	3/8	35.29	CMD104CB	35.29
CMD122CB	3/16	2	1/2	3 1/2	3/8	36.59	CMD124CB	36.59
CMD142CB	7/32	2	9/16	3 1/2	3/8	38.99	CMD144CB	38.99
CMD162CB	1/4	2	5/8	3 1/2	3/8	39.99	CMD164CB	39.99
CMD202CB	5/16	2	3/4	3 1/2	5/16	45.98	CMD204CB	45.98
CMD242CB	3/8	2	3/4	3 1/2	3/8	46.98	CMD244CB	46.98
CMD282CB	7/16	2	7/8	4	7/16	64.99	CMD284CB	64.99
CMD322CB	1/2	2	1	4	1/2	69.99	CMD324CB	69.99



TAPERED END MILLS Series "TM" & "TB" End Mills

30° Constant Helix

- Hold Draft Angles in Die & Mold Applications
- R.H. Cutting



PART NUMBER	TAPER/SIDE	TIP DIA	FLUTES	LOC	OAL	SHANK	PRICE
TM1D08163CB	1°	1/8	3	1 1/2	3	1/4	44.12
TM1D12243CB	1°	3/16	3	1 3/4	3 1/2	3/8	59.00
TM1D16323CB	1°	1/4	3	2	4	1/2	87.22
TM1.5D08163CB	1.5°	1/8	3	1 1/2	3	1/4	44.12
TM1.5D12243CB	1.5°	3/16	3	1 3/4	3 1/2	3/8	59.00
TM1.5D16323CB	1.5°	1/4	3	2	4	1/2	87.22
TM2D08163CB	2°	1/8	3	1 1/2	3	1/4	44.12
TM2D12243CB	2°	3/16	3	1 3/4	3 1/2	3/8	59.00
TM2D16323CB	2°	1/4	3	2	4	1/2	87.22
TM3D08163CB	3°	1/8	3	1 1/2	3	1/4	44.12
TM3D10243CB	3°	3/16	3	1 3/4	3 1/2	3/8	59.00
TM3D16323CB	3°	1/4	3	2	4	1/2	87.22
TM5D08163CB	5°	1/8	3	1 1/2	3	1/4	44.12
TM5D08243CB	5°	3/16	3	1 3/4	3 1/2	3/8	59.00
TM5D16323CB	5°	1/4	3	2	4	1/2	87.22
TM7D08163CB	7°	1/8	3	1 1/2	3	1/4	44.12
TM7D08243CB	7°	3/16	3	1 3/4	3 1/2	3/8	59.00
TM7D12323CB	7°	1/4	3	2	4	1/2	87.22
TM10D06163CB	10°	1/8	3	1 1/2	3	1/4	44.12
TM10D08243CB	10°	3/16	3	1 3/4	3 1/2	3/8	59.00
TM10D08323CB	10°	1/4	3	2	4	1/2	87.22



PART NUMBER	TAPER/SIDE	TIP DIA	FLUTES	LOC	OAL	SHANK	PRICE
TB1D08163CB	1°	1/8	3	1 1/2	3	1/4	47.89
TB1D12243CB	1°	3/16	3	1 3/4	3 1/2	3/8	59.62
TB1D16323CB	1°	1/4	3	2	4	1/2	88.12
TB1.5D08163CB	1.5°	1/8	3	1 1/2	3	1/4	47.89
TB1.5D12243CB	1.5°	3/16	3	1 3/4	3 1/2	3/8	59.62
TB1.5D16323CB	1.5°	1/4	3	2	4	1/2	88.12
TB2D08163CB	2°	1/8	3	1 1/2	3	1/4	47.89
TB2D12243CB	2°	3/16	3	1 3/4	3 1/2	3/8	59.62
TB2D16323CB	2°	1/4	3	2	4	1/2	88.12
TB3D08163CB	3°	1/8	3	1 1/2	3	1/4	47.89
TB3D10243CB	3°	3/16	3	1 3/4	3 1/2	3/8	59.62
TB3D16323CB	3°	1/4	3	2	4	1/2	88.12
TB5D08163CB	5°	1/8	3	1 1/2	3	1/4	47.89
TB5D08243CB	5°	3/16	3	1 3/4	3 1/2	3/8	59.62
TB5D16323CB	5°	1/4	3	2	4	1/2	88.12
TB7D08163CB	7°	1/8	3	1 1/2	3	1/4	47.89
TB7D08243CB	7°	3/16	3	1 3/4	3 1/2	3/8	59.62
TB7D12323CB	7°	1/4	3	2	4	1/2	88.12
TB10D06163CB	10°	1/8	3	1 1/2	3	1/4	47.89
TB10D08243CB	10°	3/16	3	1 3/4	3 1/2	3/8	59.62
TB10D08323CB	10°	1/4	3	2	4	1/2	88.12

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HIGH PERFORMANCE
CARBIDE TOOLS



CORNER ROUNDING END MILLS 3FL Series "CRE" & "CREL" End Mills

ALSO SEE INDEXABLE CORNER ROUNDING END MILLS ON
PAGE 78-81



PART NUMBER	PILOT			OAL	SHANK	PRICE
	RAD	DIA	#FL			
CRE.010083CB	0.010	0.085	3	1 1/2	1/8	26.95
CRE.015083CB	0.015	0.075	3	1 1/2	1/8	26.95
CRE.020083CB	0.020	0.056	3	1 1/2	1/8	26.95
CRE.025123CB	0.025	0.107	3	2	3/16	26.95
CRE.030123CB	0.030	0.097	3	2	3/16	26.95
CRE.035123CB	0.035	0.087	3	2	3/16	26.95
CRE.040123CB	0.040	0.077	3	2	3/16	26.95
CRE.045163CB	0.045	0.130	3	2	1/4	34.65
CRE.050163CB	0.050	0.120	3	2	1/4	34.65
CRE.055163CB	0.055	0.110	3	2	1/4	34.65
CRE.060163CB	0.060	0.100	3	2	1/4	35.75
CRE.065163CB	0.065	0.090	3	2	1/4	35.75
CRE.070163CB	0.070	0.080	3	2	1/4	35.75
CRE.075163CB	0.075	0.070	3	2	1/4	40.15
CRE.080203CB	0.080	0.122	3	2 1/2	5/16	40.15
CRE.085203CB	0.085	0.112	3	2 1/2	5/16	40.15
CRE.090203CB	0.090	0.102	3	2 1/2	5/16	40.15
CRE.095203CB	0.095	0.092	3	2 1/2	5/16	40.15
CRE.100203CB	0.100	0.082	3	2 1/2	5/16	40.15
CRE.105243CB	0.105	0.135	3	2 1/2	3/8	61.60
CRE.110243CB	0.110	0.125	3	2 1/2	3/8	61.60
CRE.115243CB	0.115	0.115	3	2 1/2	3/8	61.60
CRE.120243CB	0.120	0.105	3	2 1/2	3/8	61.60
CRE.125243CB	0.125	0.095	3	2 1/2	3/8	61.60
CRE.130243CB	0.130	0.085	3	2 1/2	3/8	61.60
CRE.140283CB	0.140	0.127	3	2 1/2	7/16	72.60
CRE.150283CB	0.150	0.107	3	2 1/2	7/16	72.60
CRE.156323CB	0.156	0.158	3	2 1/2	1/2	90.20
CRE.160323CB	0.160	0.150	3	2 1/2	1/2	90.20
CRE.170323CB	0.170	0.130	3	2 1/2	1/2	90.20
CRE.180323CB	0.180	0.110	3	2 1/2	1/2	90.20
CRE.187323CB	0.187	0.096	3	2 1/2	1/2	90.20
CRE.190323CB	0.190	0.090	3	2 1/2	1/2	90.20
CRE.200363CB	0.200	0.132	3	2 1/2	9/16	107.80
CRE.210363CB	0.210	0.112	3	3	9/16	107.80
CRE.220403CB	0.220	0.155	3	3	5/8	118.80
CRE.236403CB	0.236	0.123	3	3	5/8	118.80



PART NUMBER	RAD	PILOT		OAL	SHANK	PRICE
		DIA	#FL			
CREL.010163CB	0.010	0.198	3	4	1/4	55.77
CREL.015163CB	0.015	0.188	3	4	1/4	55.77
CREL.020163CB	0.020	0.178	3	4	1/4	55.77
CREL.025163CB	0.025	0.168	3	4	1/4	55.77
CREL.030163CB	0.030	0.158	3	4	1/4	55.77
CREL.035163CB	0.035	0.148	3	4	1/4	55.77
CREL.040163CB	0.040	0.138	3	4	1/4	55.77
CREL.050163CB	0.050	0.118	3	4	1/4	59.80
CREL.060163CB	0.060	0.098	3	4	1/4	66.70
CREL.070243CB	0.070	0.203	3	4	3/8	74.75
CREL.080243CB	0.080	0.183	3	4	3/8	74.75
CREL.090243CB	0.090	0.163	3	4	3/8	82.80
CREL.100243CB	0.100	0.143	3	4	3/8	86.25
CREL.110243CB	0.110	0.123	3	4	3/8	89.70
CREL.120243CB	0.120	0.103	3	4	3/8	89.70
CREL.125243CB	0.125	0.093	3	4	3/8	95.45



Swift-CARB^{CNC}™

NC SPOTTING CENTERING DRILLS 2FL Series "DNC" SPOT DRILLS



- 82°, 90°, 120°, and 140° Available
- High Accuracy with close tolerances:
Shank Diameter: -.0001" to -.0003"
Drill Diameter: +.000" to -.0005"
- Coated in: (20C) AlTiN , (30C) TiCN

TO ORDER COATED ADD
"20C" (TiAlN) OR "30C"
(TiCN) TO THE END OF THE
PART NUMBER

48

HIGH PERFORMANCE
CARBIDE TOOLS

PART NUMBER	DRILL POINT	DIA	FLUTES	LOC	OAL	SHANK	PRICE	COATED
DNC.1250CB90	90	1/8	2	1/4	1 1/2	1/8	14.18	15.86
DNC.1250CB100	100	1/8	2	1/4	1 1/2	1/8	14.18	15.86
DNC.1875CB82	82	3/16	2	3/8	2	3/16	14.58	16.73
DNC.1875CB90	90	3/16	2	3/8	2	3/16	14.58	16.73
DNC.1875CB100	100	3/16	2	3/8	2	3/16	14.58	16.73
DNC.1875CB120	120	3/16	2	3/8	3	3/16	14.58	16.73
DNC.1875CB140	140	3/16	2	3/8	2	3/16	14.58	16.73
DNC.2500CB82	82	1/4	2	1/2	2 1/2	1/4	15.73	19.05
DNC.2500CB90	90	1/4	2	1/2	2 1/2	1/4	15.73	19.05
DNC.2500CB100	100	1/4	2	1/2	2 1/2	1/4	15.73	19.05
DNC.2500CB120	120	1/4	2	1/2	2 1/2	1/4	15.73	19.05
DNC.2500CB140	140	1/4	2	1/2	2 1/2	1/4	15.73	19.05
DNC.3750CB82	82	3/8	2	5/8	2 1/2	3/8	23.1	27.86
DNC.3750CB90	90	3/8	2	5/8	2 1/2	3/8	23.1	27.86
DNC.3750CB100	100	3/8	2	5/8	2 1/2	3/8	23.1	27.86
DNC.3750CB120	120	3/8	2	5/8	2 1/2	3/8	23.1	27.86
DNC.3750CB140	140	3/8	2	5/8	2 1/2	3/8	23.1	27.86
DNC.5000CB82	82	1/2	2	3/4	3	1/2	36.13	44.24
DNC.5000CB90	90	1/2	2	3/4	3	1/2	36.13	44.24
DNC.5000CB100	100	1/2	2	3/4	3	1/2	36.13	44.24
DNC.5000CB120	120	1/2	2	3/4	3	1/2	36.13	44.24
DNC.5000CB140	140	1/2	2	3/4	3	1/2	36.13	44.24
DNC.6250CB82	82	5/8	2	7/8	3	5/8	66.5	74.92
DNC.6250CB90	90	5/8	2	7/8	3	5/8	66.5	74.92
DNC.6250CB100	100	5/8	2	7/8	3	5/8	66.5	74.92
DNC.6250CB120	120	5/8	2	7/8	3	5/8	66.5	74.92
DNC.6250CB140	140	5/8	2	7/8	3	5/8	66.5	74.92
DNC.7500CB82	82	3/4	2	1	3	3/4	100.98	111.22
DNC.7500CB90	90	3/4	2	1	3	3/4	100.98	111.22
DNC.7500CB100	100	3/4	2	1	3	3/4	100.98	111.22
DNC.7500CB120	120	3/4	2	1	3	3/4	100.98	111.22
DNC.7500CB140	140	3/4	2	1	3	3/4	100.98	111.22



XL NC SPOTTING CENTERING DRILLS 2FL Series "DNCX" SPOT DRILLS



TO ORDER COATED ADD
"20C" (TiAlN) OR "30C"
(TiCN) TO THE END OF THE
PART NUMBER

PART NUMBER	DRILL POINT	DIA	FLUTES	LOC	OAL	SHANK	PRICE	COATED
DNCX.1250CB90	90	1/8	2	1/4	4	1/8	21.75	24.16
DNCX.1250CB100	100	1/8	2	1/4	4	1/8	21.75	24.16
DNCX.1875CB82	82	3/16	2	3/8	4	3/16	24.31	27.02
DNCX.1875CB90	90	3/16	2	3/8	4	3/16	24.31	27.02
DNCX.1875CB100	100	3/16	2	3/8	4	3/16	24.31	27.02
DNCX.1875CB120	120	3/16	2	3/8	4	3/16	24.31	27.02
DNCX.1875CB140	140	3/16	2	3/8	4	3/16	24.31	27.02
DNCX.2500CB82	82	1/4	2	1/2	4	1/4	25.74	28.6
DNCX.2500CB90	90	1/4	2	1/2	4	1/4	25.74	28.6
DNCX.2500CB100	100	1/4	2	1/2	4	1/4	25.74	28.6
DNCX.2500CB120	120	1/4	2	1/2	4	1/4	25.74	28.6
DNCX.2500CB140	140	1/4	2	1/2	4	1/4	25.74	28.6
DNCX.3750CB82	82	3/8	2	5/8	4	3/8	35.93	39.92
DNCX.3750CB90	90	3/8	2	5/8	4	3/8	35.93	39.92
DNCX.3750CB100	100	3/8	2	5/8	4	3/8	35.93	39.92
DNCX.3750CB120	120	3/8	2	5/8	4	3/8	35.93	39.92
DNCX.3750CB140	140	3/8	2	5/8	4	3/8	35.93	39.92
DNCX.5000CB82	82	1/2	2	3/4	6	1/2	55.22	61.35
DNCX.5000CB90	90	1/2	2	3/4	6	1/2	55.22	61.35
DNCX.5000CB100	100	1/2	2	3/4	6	1/2	55.22	61.35
DNCX.5000CB120	120	1/2	2	3/4	6	1/2	55.22	61.35
DNCX.5000CB140	140	1/2	2	3/4	6	1/2	55.22	61.35
DNCX.6250CB82	82	5/8	2	7/8	6	5/8	98.11	109.02
DNCX.6250CB90	90	5/8	2	7/8	6	5/8	98.11	109.02
DNCX.6250CB100	100	5/8	2	7/8	6	5/8	98.11	109.02
DNCX.6250CB120	120	5/8	2	7/8	6	5/8	98.11	109.02
DNCX.6250CB140	140	5/8	2	7/8	6	5/8	98.11	109.02
DNCX.7500CB82	82	3/4	2	1	6	3/4	151.29	168.1
DNCX.7500CB90	90	3/4	2	1	6	3/4	151.29	168.1
DNCX.7500CB100	100	3/4	2	1	6	3/4	151.29	168.1
DNCX.7500CB120	120	3/4	2	1	6	3/4	151.29	168.1
DNCX.7500CB140	140	3/4	2	1	6	3/4	151.29	168.1



Swift-CARB^{CNC}™

CHAMFER MILLS 2 & 4 FL Series "CHMR" CHAMFER MILLS



SPECIAL ANGLES AVAILABLE ON REQUEST

TO ORDER COATED ADD
"20C" (TiAlN) OR "30C"
(TiCN) TO THE END OF THE
PART NUMBER

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HIGH PERFORMANCE
CARBIDE TOOLS



2FL PART #	4FL PART #	DIA	OAL	INCL ANGLE	SHANK	PRICE	COATED
CHMR08260CB	N/A	1/8	1 1/2	60	1/8	19.80	24.20
CHMR12260CB	N/A	3/16	2	60	3/16	21.45	25.85
CHMR16260CB	CHMR16460CB	1/4	2 1/2	60	1/4	22.00	26.95
CHMR24260CB	CHMR24460CB	3/8	2 1/2	60	3/8	30.80	38.23
CHMR32260CB	CHMR32460CB	1/2	3	60	1/2	37.40	46.48
CHMR48260CB	CHMR48460CB	3/4	3	60	3/4	104.50	117.92
CHMR64260CB	CHMR64460CB	1	3	60	1	141.68	160.38
CHMR08290CB	N/A	1/8	1 1/2	90	1/8	19.80	24.20
CHMR12290CB	N/A	3/16	2	90	3/16	21.45	25.85
CHMR16290CB	CHMR16490CB	1/4	2 1/2	90	1/4	22.00	26.95
CHMR24290CB	CHMR24490CB	3/8	2 1/2	90	3/8	30.80	38.23
CHMR32290CB	CHMR32490CB	1/2	3	90	1/2	37.40	46.48
CHMR48290CB	CHMR48490CB	3/4	3	90	3/4	104.50	117.92
CHMR64290CB	CHMR64490CB	1	3	90	1	141.68	160.38
CHMR082100CB	N/A	1/8	1 1/2	100	1/8	19.80	24.20
CHMR122100CB	N/A	3/16	1 1/2	100	3/16	21.45	25.85
CHMR162100CB	CHMR164100CB	1/4	2 1/2	100	1/4	22.00	26.95
CHMR242100CB	CHMR244100CB	3/8	2 1/2	100	3/8	30.80	38.23
CHMR322100CB	CHMR324100CB	1/2	3	100	1/2	37.40	46.48
CHMR482100CB	CHMR484100CB	3/4	3	100	3/4	104.50	117.92
CHMR642100CB	CHMR644100CB	1	3	100	1	141.68	160.38
CHMR082120CB	N/A	1/8	1 1/2	120	1/8	19.80	24.20
CHMR122120CB	N/A	3/16	2	120	3/16	21.45	25.85
CHMR162120CB	CHMR164120CB	1/4	2 1/2	120	1/4	22.00	26.95
CHMR242120CB	CHMR244120CB	3/8	2 1/2	120	3/8	30.80	38.23
CHMR322120CB	CHMR324120CB	1/2	3	120	1/2	37.40	46.48
CHMR482120CB	CHMR484120CB	3/4	3	120	3/4	104.50	117.92
CHMR642120CB	CHMR644120CB	1	3	120	1	141.68	160.38



APPLICATIONS GUIDE

FEEDS & SPEEDS

“SD” & “SH” - 52-53

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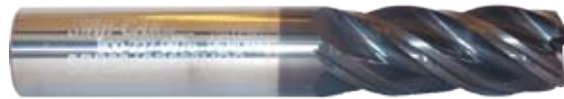
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Swift-CARB CNC™

Series "SD" & "SH" End Mills DIFFERENTIAL PITCH/HELIX



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HIGH PERFORMANCE
CARBIDE TOOLS

Series "SD" & "SH" 4 flute Feeds and Speeds													
Stainless Steels (Austenitic)303, 304, 304L, 312, 316, 316L													
Diameter		Chip Load Per Tooth			Surface Feet Per/Min			RPM			Feed Inches Per/Min		
		Full Slotting	Full Slotting	Peripheral	Full Slotting	Peripheral				Light	Mid	Heavy	
		1X DIA	1/2 X DIA	chip load	SFM Range	Max	Rpm	Mid	Max	IPM	IPM	Max	
1/8	0.125	0.001	0.001	0.001	200	250	325	6118	3278	9932	14.7	13	56
5/32	0.156	0.001	0.001	0.002	200	250	325	4896	2623	7948	15.7	14	57
3/16	0.188	0.001	0.001	0.002	200	250	325	4079	2185	6621	14.7	13	53
7/32	0.219	0.001	0.002	0.002	200	250	325	3496	1873	5675	14.0	13	54
1/4	0.250	0.001	0.002	0.003	200	250	325	3059	1639	4966	17.1	13	52
9/32	0.218	0.002	0.002	0.003	200	250	325	3504	1877	5688	21.0	17	68
5/16	0.313	0.002	0.002	0.003	200	250	325	2447	1311	3973	17.6	13	49
11/32	0.344	0.001	0.002	0.003	200	250	325	2225	1192	3612	12.5	11	49
3/8	0.375	0.002	0.003	0.004	200	250	325	2039	1093	3311	17.1	12	46
7/16	0.438	0.002	0.003	0.004	200	250	325	1748	936	2838	16.1	12	44
1/2	0.500	0.003	0.004	0.005	200	250	325	1530	819	2483	15.3	11	45
5/8	0.625	0.003	0.004	0.005	200	250	325	1224	656	1986	14.7	10	40
3/4	0.750	0.004	0.005	0.006	200	250	325	1020	546	1655	16.3	11	40
1	1.000	0.005	0.006	0.007	200	250	325	765	410	1242	15.3	9	32
1 1/4	1.250	0.006	0.006	0.007	200	250	325	612	328	993	13.5	8	28

Stainless Steel (Precipitation)15-5PH, 17-4PH, Die and Mold Steels P-20, High Strength Alloys 40XX, 41XX, 42XX, 43XX, 44XX, 46XX, 86XX													
Diameter		Chip Load Per Tooth			Surface Feet Per/Min			RPM			Feed Inches Per/Min		
		Full Slotting	Full Slotting	Peripheral	Full Slotting	Peripheral				Light	Mid	Heavy	
		1X DIA	1/2 X DIA	chip load	SFM Range	Max	Rpm	Mid	Max	IPM	IPM	Max	
1/8	0.125	0.001	0.001	0.001	200	400	500	6112	5042	15280	14.7	20	86
5/32	0.156	0.001	0.001	0.002	200	400	500	4891	4035	12228	15.7	21	88
3/16	0.188	0.001	0.001	0.002	200	400	500	4075	3362	10187	14.7	19	81
7/32	0.219	0.001	0.002	0.002	200	400	500	3493	2881	8731	14.0	20	84
1/4	0.250	0.001	0.002	0.003	200	400	500	3056	2521	7640	17.1	20	79
9/32	0.218	0.002	0.002	0.003	200	400	500	3501	2888	8751	21.0	26	105
5/16	0.313	0.002	0.002	0.003	200	400	500	2445	2017	6112	17.6	20	76
11/32	0.344	0.001	0.002	0.003	200	400	500	2223	1834	5556	12.4	18	76
3/8	0.375	0.002	0.003	0.004	200	400	500	2037	1681	5093	17.1	19	71
7/16	0.438	0.002	0.003	0.004	200	400	500	1746	1441	4366	16.1	18	68
1/2	0.500	0.003	0.004	0.005	200	400	500	1528	1261	3820	15.3	18	69
5/8	0.625	0.003	0.004	0.005	200	400	500	1222	1008	3056	14.7	16	61
3/4	0.750	0.004	0.005	0.006	200	400	500	1019	840	2547	16.3	17	61
1	1.000	0.005	0.006	0.007	200	400	500	764	630	1910	15.3	14	50
1 1/4	1.250	0.006	0.006	0.007	320	400	500	978	504	1528	21.5	13	43



Series "SD" & "SH" 4 flute Feeds and Speeds													
High Temp Alloys (Nickel and Cobalt Based) Titanium Alloys, Waspalloy, Inconel													
Diameter		Chip Load Per Tooth			Surface Feet Per/Min		RPM			Feed Inches Per/Min			
		Full Slotting	Full Slotting	Peripheral	Full Slotting	Peripheral				Light	Mid	Heavy	
		1/2X DIA	1/4 X DIA	chip load	SFM Range	Max	Rpm	Mid	Max	IPM	IPM	Max	
1/8	0.125	0.001	0.001	0.001	65	160	225	1986	2269	6876	4.0	8	33
5/32	0.156	0.001	0.001	0.002	65	160	225	1590	1816	5503	3.8	8	33
3/16	0.188	0.001	0.001	0.002	65	160	225	1324	1513	4584	3.7	8	33
7/32	0.219	0.001	0.001	0.002	65	160	225	1135	1297	3929	3.6	7	31
1/4	0.250	0.001	0.002	0.003	65	160	225	993	1135	3438	4.0	8	34
9/32	0.218	0.001	0.002	0.003	65	160	225	1138	1300	3938	5.0	10	44
5/16	0.313	0.001	0.002	0.003	65	160	225	795	908	2750	3.8	8	33
11/32	0.344	0.001	0.002	0.003	65	160	225	722	825	2500	3.8	7	32
3/8	0.375	0.001	0.002	0.004	65	160	225	662	756	2292	3.7	7	32
7/16	0.438	0.002	0.003	0.004	65	160	225	568	648	1965	3.9	7	28
1/2	0.500	0.002	0.003	0.004	65	160	225	497	567	1719	4.0	7	28
5/8	0.625	0.002	0.004	0.005	65	160	225	397	454	1375	3.8	7	28
3/4	0.750	0.003	0.004	0.006	65	160	225	331	378	1146	4.0	6	25
1	1.000	0.004	0.005	0.006	65	160	225	248	284	860	3.5	5	21
1 1/4	1.250	0.004	0.006	0.007	65	160	225	199	227	688	3.2	5	19

Low Alloy Steel, Ductile Steels, Cast Irons, Copper													
Diameter		Chip Load Per Tooth			Surface Feet Per/Min		RPM			Feed Inches Per/Min			
		Full Slotting	Full Slotting	Peripheral	Full Slotting	Peripheral				Light	Mid	Heavy	
		1X DIA	1/2 X DIA	chip load	SFM Range	Max	Rpm	Mid	Max	IPM	IPM	Max	
1/8	0.125	0.001	0.001	0.001	200	450	600	6112	6051	18336	14.7	24	103
5/32	0.156	0.001	0.001	0.002	200	450	600	4891	4842	14673	15.7	25	106
3/16	0.188	0.001	0.002	0.002	200	450	600	4075	4034	12224	16.3	24	98
7/32	0.219	0.002	0.002	0.002	200	450	600	3493	3458	10478	21.0	27	101
1/4	0.250	0.002	0.002	0.003	200	450	600	3056	3025	9168	20.8	27	103
9/32	0.218	0.002	0.002	0.003	200	450	600	3501	3466	10502	26.6	34	126
5/16	0.313	0.002	0.003	0.003	200	450	600	2445	2420	7334	20.5	27	100
11/32	0.344	0.002	0.003	0.004	200	450	600	2223	2200	6668	19.6	26	99
3/8	0.375	0.003	0.003	0.004	200	450	600	2037	2017	6112	20.4	27	100
7/16	0.438	0.003	0.004	0.005	200	450	600	1746	1729	5239	18.9	26	101
1/2	0.500	0.003	0.004	0.006	200	450	600	1528	1513	4584	18.3	26	101
5/8	0.625	0.004	0.005	0.007	200	450	600	1222	1210	3667	19.6	25	95
3/4	0.750	0.005	0.006	0.008	200	450	600	1019	1008	3056	18.3	25	95
1	1.000	0.006	0.008	0.010	200	450	600	764	756	2292	18.3	24	92
1 1/4	1.250	0.007	0.009	0.011	200	450	600	611	605	1834	17.1	22	81



Series "XM" 7 Flute Feeds and Speeds

Stainless Steels (Austenitic) 303, 304, 304L, 312, 316, 316L

Diameter		Chip Load Per Tooth			Surface Feet Per/Min			RPM			Feed Inches Per/Min		
		Heavy	Light	Finishing	SFM	Mid range	Max	Rpm	Mid	Max	Light	Mid	Heavy
		Peripheral									IPM	IPM	Max
1/8	0.125	0.001	0.001	0.001	85	187.5	375	2598	3782	11460	9.1	24	104
5/32	0.156	0.001	0.001	0.002	85	187.5	375	2079	3026	9171	8.7	22	96
3/16	0.188	0.001	0.001	0.002	85	187.5	375	1732	2521	7640	8.5	22	96
7/32	0.219	0.001	0.002	0.002	85	187.5	375	1484	2161	6549	9.4	25	110
1/4	0.250	0.001	0.002	0.003	85	187.5	375	1299	1891	5730	10.9	26	112
9/32	0.218	0.001	0.002	0.003	85	187.5	375	1488	2166	6564	14.6	33	138
5/16	0.313	0.002	0.002	0.003	85	187.5	375	1039	1513	4584	10.9	24	99
11/32	0.344	0.002	0.003	0.004	85	187.5	375	945	1375	4167	11.2	25	102
3/8	0.375	0.002	0.003	0.004	85	187.5	375	866	1261	3820	10.9	25	102
7/16	0.438	0.002	0.003	0.005	85	187.5	375	742	1081	3274	10.4	25	103
1/2	0.500	0.003	0.004	0.005	85	187.5	375	649	945	2865	11.4	25	100
5/8	0.625	0.003	0.005	0.006	85	187.5	375	520	756	2292	10.9	24	96
3/4	0.750	0.004	0.006	0.007	85	187.5	375	433	630	1910	12.1	24	95
1	1.000	0.005	0.008	0.010	85	187.5	375	325	473	1433	11.4	25	100
1 1/4	1.250	0.006	0.009	0.012	150	187.5	375	458	378	1146	19.3	24	96

Stainless Steel (Precipitation) 15-5PH, 17-4PH, Die and Mold Steels P-20, High Strength Alloys 40XX, 41XX, 42XX, 43XX, 44XX, 46XX, 86XX

Diameter		Chip Load Per Tooth			Surface Feet Per/Min			RPM			Feed Inches Per/Min		
		Heavy	Light	Finishing	SFM	Mid range	Max	Rpm	Mid	Max	Light	Mid	Heavy
		Peripheral									IPM	IPM	Max
1/8	0.125	0.001	0.001	0.001	85	162.5	325	2598	3278	9932	9.1	21	90
5/32	0.156	0.001	0.001	0.002	85	162.5	325	2079	2623	7948	8.7	19	83
3/16	0.188	0.001	0.001	0.002	85	162.5	325	1732	2185	6621	8.5	19	83
7/32	0.219	0.001	0.002	0.002	85	162.5	325	1484	1873	5675	9.4	22	95
1/4	0.250	0.001	0.002	0.003	85	162.5	325	1299	1639	4966	10.9	23	97
9/32	0.218	0.001	0.002	0.003	85	162.5	325	1488	1877	5688	14.6	29	119
5/16	0.313	0.002	0.002	0.003	85	162.5	325	1039	1311	3973	10.9	21	86
11/32	0.344	0.002	0.003	0.004	85	162.5	325	945	1192	3612	11.2	22	88
3/8	0.375	0.002	0.003	0.004	85	162.5	325	866	1093	3311	10.9	21	88
7/16	0.438	0.002	0.003	0.005	85	162.5	325	742	936	2838	10.4	21	89
1/2	0.500	0.003	0.004	0.005	85	162.5	325	649	819	2483	11.4	22	87
5/8	0.625	0.003	0.005	0.006	85	162.5	325	520	656	1986	10.9	21	83
3/4	0.750	0.004	0.006	0.007	85	162.5	325	433	546	1655	12.1	21	82
1	1.000	0.005	0.008	0.010	85	162.5	325	325	410	1242	11.4	22	87
1 1/4	1.250	0.006	0.009	0.012	75	162.5	325	229	328	993	9.6	21	83



Series "XM" 7 Flute Feeds and Speeds													
High Temp Alloys (Nickel and Cobalt Based) Titanium Alloys, Waspalloy, Inconel													
Diameter		Chip Load Per Tooth			Surface Feet Per/Min			RPM			Feed Inches Per/Min		
		Heavy	Light	Finishing							Light	Mid	Heavy
		Peripheral	chip load	SFM	Mid range	Max	Rpm	Mid	Max	IPM	IPM	Max	
1/8	0.125	0.001	0.001	0.001	40	112.5	225	1222	2269	6876	4.3	14	63
5/32	0.156	0.001	0.001	0.002	40	112.5	225	978	1816	5503	4.1	13	58
3/16	0.188	0.001	0.001	0.002	40	112.5	225	815	1513	4584	4.0	13	58
7/32	0.219	0.001	0.001	0.002	40	112.5	225	699	1297	3929	3.9	12	52
1/4	0.250	0.001	0.002	0.002	40	112.5	225	611	1135	3438	4.3	12	48
9/32	0.218	0.001	0.002	0.002	40	112.5	225	700	1300	3938	5.4	15	63
5/16	0.313	0.001	0.002	0.003	40	112.5	225	489	908	2750	4.1	12	48
11/32	0.344	0.001	0.002	0.003	40	112.5	225	445	825	2500	4.0	12	49
3/8	0.375	0.001	0.002	0.003	40	112.5	225	407	756	2292	4.0	12	48
7/16	0.438	0.002	0.003	0.004	40	112.5	225	349	648	1965	4.2	12	48
1/2	0.500	0.002	0.003	0.004	40	112.5	225	306	567	1719	4.3	12	48
5/8	0.625	0.002	0.004	0.005	40	112.5	225	244	454	1375	4.1	11	46
3/4	0.750	0.003	0.005	0.006	40	112.5	225	204	378	1146	4.3	12	48
1	1.000	0.004	0.006	0.008	40	112.5	225	153	284	860	3.7	11	48
1 1/4	1.250	0.004	0.007	0.009	40	112.5	225	122	227	688	3.4	10	43

Low Alloy Steel, Ductile Steels, Cast Irons, Copper													
Diameter		Chip Load Per Tooth			Surface Feet Per/Min			RPM			Feed Inches Per/Min		
		Heavy	Light	Finishing							Light	Mid	Heavy
		Peripheral	chip load	SFM	Mid range	Max	Rpm	Mid	Max	IPM	IPM	Max	
1/8	0.125	0.001	0.001	0.001	200	300	600	6112	6051	18336	25.7	40	167
5/32	0.156	0.001	0.001	0.002	200	300	600	4891	4842	14673	27.4	44	185
3/16	0.188	0.001	0.002	0.002	200	300	600	4075	4034	12224	28.5	42	171
7/32	0.219	0.002	0.002	0.002	200	300	600	3493	3458	10478	36.7	47	176
1/4	0.250	0.002	0.002	0.003	200	300	600	3056	3025	9168	36.4	48	180
9/32	0.218	0.002	0.002	0.003	200	300	600	3501	3466	10502	46.6	59	221
5/16	0.313	0.002	0.003	0.003	200	300	600	2445	2420	7334	35.9	47	175
11/32	0.344	0.002	0.003	0.004	200	300	600	2223	2200	6668	34.2	45	173
3/8	0.375	0.003	0.003	0.004	200	300	600	2037	2017	6112	35.7	47	175
7/16	0.438	0.003	0.004	0.005	200	300	600	1746	1729	5239	33.0	45	176
1/2	0.500	0.003	0.004	0.006	200	300	600	1528	1513	4584	32.1	45	176
5/8	0.625	0.004	0.005	0.007	200	300	600	1222	1210	3667	34.2	44	167
3/4	0.750	0.005	0.006	0.008	200	300	600	1019	1008	3056	32.1	43	167
1	1.000	0.006	0.009	0.011	200	300	600	764	756	2292	32.1	45	176
1 1/4	1.250	0.007	0.010	0.012	200	300	600	611	605	1834	29.9	40	154



EXOTIC ALLOYS/STAINLESS STEEL

Series "SM" *Swift-CARB* CNC™ End Mills

- Available in 5 Flute
- Stronger core for heavier cuts
- Stocked in AlTiN (20C), & TiCN (30C)
- Excellent for heat resistant and Hi-Nickel alloys
- Stub, Regular, Medium, Long, X-Long Lengths



MADE IN USA



These end mills are medium helix which have been balanced for the ultimate in smooth cutting performance. They have a stronger core for heavier cutting. The *Swift-CARB* CNC™ SM Series end mills are excellent for heat resistant and Hi-Nickel alloys (15-5, 17-4, Titanium, Inconel, just to name a few). The AlTiN (20C) coating is preferred for the additional wear and heat resistant alloys.

Low Alloy Steel,
Ductile Steels,
Cast Irons, Copper

Series "SM" 5FL Feeds and Speeds													
DIA.		Chip Load Per Tooth			FEED I.P.M.			R.P.M.			S.F.P.M.		
		PERIPHERAL		FINISHING	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
		HEAVY	LIGHT										
1/8	0.1250	0.0006	0.0010	0.0013	18.3	29	119	6112	6051	18336	200	300	600
5/32	0.1562	0.0008	0.0013	0.0018	19.6	31	132	4891	4842	14673	200	300	600
3/16	0.1875	0.0010	0.0015	0.0020	20.4	30	122	4075	4034	12224	200	300	600
7/32	0.2188	0.0015	0.0020	0.0024	26.2	34	126	3493	3458	10478	200	300	600
1/4	0.2500	0.0017	0.0023	0.0028	26.0	34	128	3056	3025	9168	200	300	600
9/32	0.2183	0.0019	0.0025	0.0030	33.3	42	158	3501	3466	10502	200	300	600
5/16	0.3125	0.0021	0.0028	0.0034	25.7	33	125	2445	2420	7334	200	300	600
11/32	0.3438	0.0022	0.0030	0.0037	24.4	32	123	2223	2200	6668	200	300	600
3/8	0.3750	0.0025	0.0033	0.0041	25.5	33	125	2037	2017	6112	200	300	600
7/16	0.4375	0.0027	0.0038	0.0048	23.6	32	126	1746	1729	5239	200	300	600
1/2	0.5000	0.0030	0.0043	0.0055	22.9	32	126	1528	1513	4584	200	300	600
5/8	0.6250	0.0040	0.0053	0.0065	24.4	32	119	1222	1210	3667	200	300	600
3/4	0.7500	0.0045	0.0062	0.0078	22.9	31	119	1019	1008	3056	200	300	600
1	1.0000	0.0060	0.0085	0.0110	22.9	32	126	764	756	2292	200	300	600
1 1/4	1.2500	0.0070	0.0095	0.0120	21.4	29	110	611	605	1834	200	300	600

The Speeds and Feeds recommended on the "SM" charts are for starting points. New Tech Cutting Tools, Inc. can offer technical support on high speed machining and horsepower.

Stainless Steel
(Precipitation)
15-5PH, 17-4PH,
Die & Mold Steels
P-20,
High Strength Alloys
40XX, 41XX, 42XX,
43XX, 44XX, 46XX,
& 86XX

Series "SM" 5FL Feeds and Speeds													
DIA.		Chip Load Per Tooth			FEED I.P.M.			R.P.M.			S.F.P.M.		
		PERIPHERAL		FINISHING	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
		HEAVY	LIGHT										
1/8	0.1250	0.0006	0.0010	0.0013	7.8	16	65	2598	3278	9932	85	162.5	325
5/32	0.1562	0.0008	0.0012	0.0015	8.3	15	60	2079	2623	7948	85	162.5	325
3/16	0.1875	0.0009	0.0014	0.0018	7.8	15	60	1732	2185	6621	85	162.5	325
7/32	0.2188	0.0010	0.0017	0.0024	7.4	16	68	1484	1873	5675	85	162.5	325
1/4	0.2500	0.0014	0.0021	0.0028	9.1	17	70	1299	1639	4966	85	162.5	325
9/32	0.2183	0.0015	0.0023	0.0030	11.2	21	85	1488	1877	5688	85	162.5	325
5/16	0.3125	0.0018	0.0025	0.0031	9.4	16	62	1039	1311	3973	85	162.5	325
11/32	0.3438	0.0014	0.0025	0.0035	9.7	16	63	945	1192	3612	85	162.5	325
3/8	0.3750	0.0021	0.0030	0.0038	9.1	16	63	866	1093	3311	85	162.5	325
7/16	0.4375	0.0025	0.0035	0.0045	9.3	16	64	742	936	2838	85	162.5	325
1/2	0.5000	0.0030	0.0040	0.0050	9.7	16	62	649	819	2483	85	162.5	325
5/8	0.6250	0.0035	0.0048	0.0060	9.1	16	60	520	656	1986	85	162.5	325
3/4	0.7500	0.0040	0.0056	0.0071	8.7	15	59	433	546	1655	85	162.5	325
1	1.0000	0.0060	0.0080	0.0100	9.7	16	62	325	410	1242	85	162.5	325
1 1/4	1.2500	0.0065	0.0093	0.0120	7.4	15	60	229	328	993	75	162.5	325



Series "SM" Swift-CARB^{CNC}™ End Mills

- Available in 5 Flute
- Stronger core for heavier cuts
- Stocked in AlTiN (20C), & TiCN (30C)
- Excellent for heat resistant and Hi-Nickel alloys
- Stub, Regular, Medium, Long, X-Long Lengths



STAINLESS STEELS (AUSTENITIC) 303, 304, 304L, 316, 316L

Series "SM" 5FL Feeds and Speeds													
DIA.	Chip Load Per Tooth				FEED I.P.M.			R.P.M.			S.F.P.M.		
	PERIPHERAL		FINISHING	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	
	HEAVY	LIGHT											
1/8	0.1250	0.0006	0.0010	0.0013	7.8	18	74	2598	3782	11460	85	187.5	375
5/32	0.1562	0.0008	0.0012	0.0015	8.3	17	69	2079	3026	9171	85	187.5	375
3/16	0.1875	0.0009	0.0014	0.0018	7.8	17	69	1732	2521	7640	85	187.5	375
7/32	0.2188	0.0010	0.0017	0.0024	7.4	18	79	1484	2161	6549	85	187.5	375
1/4	0.2500	0.0014	0.0021	0.0028	9.1	20	80	1299	1891	5730	85	187.5	375
9/32	0.2183	0.0015	0.0023	0.0030	11.2	24	98	1488	2166	6564	85	187.5	375
5/16	0.3125	0.0018	0.0025	0.0031	9.4	19	71	1039	1513	4584	85	187.5	375
11/32	0.3438	0.0014	0.0025	0.0035	6.6	17	73	945	1375	4167	85	187.5	375
3/8	0.3750	0.0021	0.0030	0.0038	9.1	19	73	866	1261	3820	85	187.5	375
7/16	0.4375	0.0025	0.0035	0.0045	9.3	19	74	742	1081	3274	85	187.5	375
1/2	0.5000	0.0030	0.0040	0.0050	9.7	19	72	649	945	2865	85	187.5	375
5/8	0.6250	0.0035	0.0048	0.0060	9.1	18	69	520	756	2292	85	187.5	375
3/4	0.7500	0.0040	0.0056	0.0071	8.7	17	68	433	630	1910	85	187.5	375
1	1.0000	0.0060	0.0080	0.0100	9.7	19	72	325	473	1433	85	187.5	375
1 1/4	1.2500	0.0065	0.0093	0.0120	8.4	17	69	260	378	1146	85	187.5	375

The Speeds and Feeds recommended on the "SM" charts are for starting points. New Tech Cutting Tools, Inc. can offer technical support on high speed machining and horsepower.

High Temp Alloys (Nickel and Cobalt Based) Titanium Alloys, Waspalloy, Inconel

Series "SM" 5FL Feeds and Speeds													
DIA.	Chip Load Per Tooth				FEED I.P.M.			R.P.M.			S.F.P.M.		
	PERIPHERAL		FINISHING	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	
	HEAVY	LIGHT											
1/8	0.1250	0.0005	0.0009	0.0013	3.1	10	45	1222	2269	6876	40	112.5	225
5/32	0.1562	0.0006	0.0011	0.0015	2.9	10	41	978	1816	5503	40	112.5	225
3/16	0.1875	0.0007	0.0013	0.0018	2.9	9	41	815	1513	4584	40	112.5	225
7/32	0.2188	0.0008	0.0014	0.0019	2.8	9	37	699	1297	3929	40	112.5	225
1/4	0.2500	0.0010	0.0015	0.0020	3.1	9	34	611	1135	3438	40	112.5	225
9/32	0.2183	0.0011	0.0017	0.0023	3.9	11	45	700	1300	3938	40	112.5	225
5/16	0.3125	0.0012	0.0019	0.0025	2.9	8	34	489	908	2750	40	112.5	225
11/32	0.3438	0.0013	0.0021	0.0028	2.9	8	35	445	825	2500	40	112.5	225
3/8	0.3750	0.0014	0.0022	0.0030	2.9	8	34	407	756	2292	40	112.5	225
7/16	0.4375	0.0017	0.0026	0.0035	3.0	8	34	349	648	1965	40	112.5	225
1/2	0.5000	0.0020	0.0030	0.0040	3.1	9	34	306	567	1719	40	112.5	225
5/8	0.6250	0.0024	0.0036	0.0048	2.9	8	33	244	454	1375	40	112.5	225
3/4	0.7500	0.0030	0.0045	0.0060	3.1	9	34	204	378	1146	40	112.5	225
1	1.0000	0.0035	0.0058	0.0080	2.7	8	34	153	284	860	40	112.5	225
1 1/4	1.2500	0.0040	0.0065	0.0090	2.4	7	31	122	227	688	40	112.5	225



ALUMINUM FINISHER

Series "AF" *Swift-CARB*^{CNC™} End Mills



MADE IN USA



- Longer Tool Life
- Less Tool Deflection
- Mirror Finishes at High Speeds
- Runs 150% to 500% faster in Aluminum
- Regular, Medium, Long, and X-Long

The *Swift-CARB*^{CNC™} manufactured end mill is a high performance, high helix tool, which has tighter control and tolerances on circle ground margins, double rake polished flutes, variable flute geometry, and micro finishes. Increased speeds are obtainable with *Swift-CARB*^{CNC™}, allowing you to remove material up to 10 times faster. This means increased productivity and higher profits off your shop floor. The *Swift-CARB*^{CNC™} End Mill is designed for finish profiling at hyper speeds and feeds which makes it perfect for the machining of nonferrous materials (Aluminum, Plastics, and Copper Alloys).

Series "AF" 4 Flute Feeds and Speeds

Diameter		Chip Load Per Tooth			Surface Feet Per/Min			Revolutions Per Min			Feed Inches Per/Min		
		Heavy	Medium	Light	SFM	Mid	Max	Rpm	Mid	Max	Light	Mid	Heavy
		Finishing			SFM	Mid	Max	Rpm	Mid	Max	IPM	IPM	Max
1/4	0.250	0.003	0.004	0.005	450	600	1500	6876	7564	22920	71.5	107	413
3/8	0.375	0.004	0.005	0.007	450	1000	2500	4584	8404	25467	69.7	175	672
7/16	0.438	0.005	0.007	0.009	450	1200	3000	3929	8644	26194	78.6	242	943
1/2	0.500	0.006	0.009	0.011	450	1400	3500	3438	8824	26740	82.5	300	1177
5/8	0.625	0.006	0.009	0.012	450	1800	4500	2750	9076	27504	70.4	334	1320
3/4	0.750	0.007	0.010	0.013	450	2000	5000	2292	8404	25467	64.2	336	1324
1	1.000	0.008	0.012	0.015	450	2400	6000	1719	7564	22920	55.0	348	1375
1 1/4	1.250	0.008	0.012	0.016	450	2400	6000	1375	6051	18336	44.0	290	1174

Series "AF" 5 Flute Feeds and Speeds

Diameter		Chip Load Per Tooth			Surface Feet Per/Min			Revolutions Per Min			Feed Inches Per/Min		
		Heavy	Medium	Light	SFM	Mid	Max	Rpm	Mid	Max	Light	Mid	Heavy
		Finishing			SFM	Mid	Max	Rpm	Mid	Max	IPM	IPM	Max
1/4	0.250	0.003	0.004	0.005	450	600	1500	6876	7564	22920	89.4	134	516
3/8	0.375	0.004	0.005	0.007	450	1000	2500	4584	8404	25467	87.1	219	840
7/16	0.438	0.005	0.007	0.009	450	1200	3000	3929	8644	26194	98.2	303	1179
1/2	0.500	0.006	0.009	0.011	450	1400	3500	3438	8824	26740	103.1	375	1471
5/8	0.625	0.006	0.009	0.012	450	1800	4500	2750	9076	27504	88.0	418	1650
3/4	0.750	0.007	0.010	0.013	450	2000	5000	2292	8404	25467	80.2	420	1655
1	1.000	0.008	0.012	0.015	450	2400	6000	1719	7564	22920	68.8	435	1719
1 1/4	1.250	0.008	0.012	0.016	450	2400	6000	1375	6051	18336	55.0	363	1467



ALUMINUM ROUGHER

Series "AR" *Swift-CARB*^{CNC™} End Mills

The *Swift-CARB*^{CNC™} manufactured end mill is a high performance, moderate helix tool, which has tighter control and tolerances on circle ground margins, double rake polished flutes, proprietary chipbreaker technology, and micro finishes. Increased speeds are obtainable with *Swift-CARB*^{CNC™} allowing you to remove material up to 10 times faster. This means increased productivity and higher profits off your shop floor. The *Swift-CARB*^{CNC™} end mill is designed for heavy material removal, and ramping at high speeds and feeds, which makes it perfect for the machining of nonferrous materials (Aluminum, Plastics, and Copper Alloys).

NEW!

MADE
IN USA

"THE FASTEST
WAY TO REMOVE
ALUMINUM."

- High Speed Roughing with Less HP
- Runs 200% to 500% faster in Aluminum
- Longer Tool Life
- Greater Feed Rates
- Better Chip Evacuation
- Less Tool Deflection
- Stub, Regular, Medium, and Long lengths



Series "AR" 3FL Aluminum Rougher's Feeds and Speeds													
DIA.		Chip Load Per Tooth			FEED I.P.M.			R.P.M.			S.F.P.M.		
		FULL SLOTTING	PERIPHERAL		LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
HEAVY	LIGHT												
1/4"	0.2500	0.0040	0.0050	0.0060	91.7	113	413	7640	7564	22920	500	600	1500
3/8"	0.3750	0.0050	0.0065	0.0080	76.4	164	611	5093	8404	25467	500	1000	2500
1/2"	0.5000	0.0070	0.0095	0.0120	104.3	216	825	4966	7564	22920	650	1200	3000
5/8"	0.6250	0.0080	0.0110	0.0140	117.4	266	1027	4890	8068	24448	800	1600	4000
3/4"	0.7500	0.0085	0.0123	0.0160	116.9	278	1100	4584	7564	22920	900	1800	4500
1"	1.0000	0.0100	0.0150	0.0200	51.6	284	1146	1719	6303	19100	450	2000	5000
1-1/4"	1.2500	0.0120	0.0170	0.0220	49.5	309	1210	1375	6051	18336	450	2400	6000



HYPER SPEED ALUMINUM SERIES

"HS" & "BHS" *Swift-CARB*^{CNC™} 3FI End Mills

The *Swift-CARB*^{CNC™} manufactured end mill is a high performance, moderate helix tool, which has tighter control and tolerances on circle ground margins, double rake polished flutes, and micro finishes. Increased speeds are obtainable with *Swift-CARB*^{CNC™}, allowing you to remove material up to 10 times faster. This means increased productivity and higher profits off your shop floor. The *Swift-CARB*^{CNC™} end mill is designed for slotting, profiling, and ramping at high speeds and feeds which makes it perfect for the machining of nonferrous materials (Aluminum, Plastics, and Copper Alloys).

- Runs 75% to 400% faster in Aluminum
- Regular, Medium, Long, X-Long Lengths
- Longer Tool Life
- High Speed Machining
- Greater Feed Rates
- Better Chip Evacuation
- Less Tool Deflection
- Leaves Superior Finishes



Series "HS" & "BHS" 3FL Aluminum Rougher/Finisher's Feeds and Speeds													
DIA.		Chip Load Per Tooth			FEED I.P.M.			R.P.M.			S.F.P.M.		
		FULL SLOTTING	PERIPHERAL		LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
HEAVY	LIGHT												
1/8	0.1250	0.0015	0.0020	0.0025	61.9	61	229	13752	10085	30560	450	400	1000
3/16	0.1875	0.0025	0.0028	0.0030	68.8	55	183	9168	6723	20373	450	400	1000
1/4	0.2500	0.0034	0.0042	0.0050	70.1	95	344	6876	7564	22920	450	600	1500
5/16	0.3125	0.0040	0.0053	0.0065	66.0	114	429	5501	7261	22003	450	720	1800
3/8	0.3750	0.0050	0.0065	0.0080	68.8	131	489	4584	6723	20373	450	800	2000
7/16	0.4375	0.0055	0.0078	0.0100	64.8	154	602	3929	6627	20082	450	920	2300
1/2	0.5000	0.0060	0.0090	0.0120	61.9	170	688	3438	6303	19100	450	1000	2500
5/8	0.6250	0.0075	0.0103	0.0130	61.9	155	596	2750	5042	15280	450	1000	2500
3/4	0.7500	0.0080	0.0115	0.0150	55.0	159	630	2292	4622	14007	450	1100	2750
1	1.0000	0.0090	0.0135	0.0180	46.4	153	619	1719	3782	11460	450	1200	3000
1 1/4	1.2500	0.0100	0.0150	0.0200	41.3	136	550	1375	3025	9168	450	1200	3000



ALUMINUM EXTENDED SERIES "HSEL" & "BHSEL" *Swift-CARB*_{CNC™} End Mills

The *Swift-CARB*_{CNC™} manufactured end mill is a high performance, moderate helix tool, which has tighter control and tolerances on circle ground margins, double rake polished flutes, and micro finishes. Increased speeds are obtainable with *Swift-CARB*_{CNC™}, allowing you to remove material up to 10 times faster. This means increased productivity and higher profits off your shop floor. The *Swift-CARB*_{CNC™} End Mill is designed for slotting, profiling, and ramping at high speeds and feeds in long reach applications, which makes it perfect for the machining of nonferrous materials (Aluminum, Plastics, and Copper Alloys).



MADE IN USA

- Runs 150% to 300% faster in Aluminum
- 3 Flute End Mills
- Stub, Regular, Medium, Long, and X-Long
- Longer Tool Life
- High Speed Machining
- Greater Feed Rates
- Better Chip Evacuation
- Less Tool Deflection
- Leaves Superior Finishes

Series "HSEL" 3FL Aluminum Rougher/Finisher's Feeds and Speeds													
DIA.		Chip Load Per Tooth			FEED I.P.M.			R.P.M.			S.F.P.M.		
		PERIPHERAL		FINISHING	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
		HEAVY	LIGHT										
1/8	0.1250	0.0012	0.0016	0.0020	49.5	48	183	13752	10085	30560	450	400	1000
3/16	0.1875	0.0020	0.0022	0.0024	55.0	44	147	9168	6723	20373	450	400	1000
1/4	0.2500	0.0027	0.0034	0.0040	56.1	76	275	6876	7564	22920	450	600	1500
5/16	0.3125	0.0032	0.0042	0.0052	52.8	91	343	5501	7261	22003	450	720	1800
3/8	0.3750	0.0040	0.0052	0.0064	55.0	105	391	4584	6723	20373	450	800	2000
7/16	0.4375	0.0044	0.0062	0.0080	51.9	123	482	3929	6627	20082	450	920	2300
1/2	0.5000	0.0048	0.0072	0.0096	49.5	136	550	3438	6303	19100	450	1000	2500
5/8	0.6250	0.0060	0.0082	0.0104	49.5	124	477	2750	5042	15280	450	1000	2500
3/4	0.7500	0.0064	0.0092	0.0120	44.0	128	504	2292	4622	14007	450	1100	2750
1	1.0000	0.0072	0.0108	0.0144	37.1	123	495	1719	3782	11460	450	1200	3000



ALUMINUM SERIES

"SC" & "BSC" *Swift-CARB* CNC™ End Mills

- Runs 50% to 300% faster in Aluminum
- 2 & 3 Flute End Mills Available
- Stub, Regular, Medium, Long, X-Long
- Longer Tool Life
- High Speed Machining
- Greater Feed Rates
- Better Chip Evacuation
- Less Tool Deflection
- Leaves Superior Finishes



MADE IN USA



The *Swift-CARB* manufactured end mill is a high performance, high helix tool, with tighter tolerances on circle ground margins, double rake polished flutes, and micro finishes. Increased speeds are obtainable with *Swift-CARB* allowing you to remove material up to 10 times faster. This means increased productivity and higher profits off your shop floor. The *Swift-CARB* end mill is designed for slotting, profiling, and ramping at high speeds and which makes it perfect for the machining of nonferrous materials (Aluminum, Plastics, and Copper Alloys).

Series "SC" 2FL Aluminum Rougher/Finisher's Feeds and Speeds

DIA.	FI.	Chip Load Per Tooth			FEED I.P.M.			R.P.M.			S.F.P.M.			
		FULL SLOTTING	PERIPHERAL		LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	
			HEAVY	LIGHT										
1/8	0.1250	2	0.0015	0.0020	0.0025	41.3	61	229	13752	15127	45840	450	600	1500
3/16	0.1875	2	0.0025	0.0028	0.0030	45.8	55	183	9168	10085	30560	450	600	1500
1/4	0.2500	2	0.0034	0.0042	0.0050	46.8	64	229	6876	7564	22920	450	600	1500
5/16	0.3125	2	0.0040	0.0053	0.0065	44.0	76	286	5501	7261	22003	450	720	1800
3/8	0.3750	2	0.0050	0.0065	0.0080	45.8	87	326	4584	6723	20373	450	800	2000
7/16	0.4375	2	0.0055	0.0078	0.0100	43.2	89	349	3929	5763	17463	450	800	2000
1/2	0.5000	2	0.0060	0.0090	0.0120	41.3	113	458	3438	6303	19100	450	1000	2500
5/8	0.6250	2	0.0075	0.0103	0.0130	41.3	103	397	2750	5042	15280	450	1000	2500
3/4	0.7500	2	0.0080	0.0115	0.0150	36.7	106	420	2292	4622	14007	450	1100	2750
1	1.0000	2	0.0090	0.0135	0.0180	30.9	102	413	1719	3782	11460	450	1200	3000
1 1/4	1.2500	2	0.0100	0.0150	0.0200	27.5	91	367	1375	3025	9168	450	1200	3000

"SC" 3FL

DIA.	FI.	Chip Load Per Tooth			FEED I.P.M.			R.P.M.			S.F.P.M.			
		PERIPHERAL		FINISHING	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	
		HEAVY	LIGHT											
1/8	0.1250	3	0.0012	0.0019	0.0025	49.5	84	344	13752	15127	45840	450	600	1500
3/16	0.1875	3	0.0025	0.0028	0.0030	68.8	83	275	9168	10085	30560	450	600	1500
1/4	0.2500	3	0.0026	0.0036	0.0045	53.6	81	309	6876	7564	22920	450	600	1500
5/16	0.3125	3	0.0030	0.0043	0.0055	49.5	93	363	5501	7261	22003	450	720	1800
3/8	0.3750	3	0.0038	0.0052	0.0065	52.3	104	397	4584	6723	20373	450	800	2000
7/16	0.4375	3	0.0045	0.0073	0.0100	53.0	125	524	3929	5763	17463	450	800	2000
1/2	0.5000	3	0.0050	0.0080	0.0110	51.6	151	630	3438	6303	19100	450	1000	2500
5/8	0.6250	3	0.0064	0.0092	0.0120	52.8	139	550	2750	5042	15280	450	1000	2500
3/4	0.7500	3	0.0070	0.0100	0.0130	48.1	139	546	2292	4622	14007	450	1100	2750
1	1.0000	3	0.0090	0.0125	0.0160	46.4	142	550	1719	3782	11460	450	1200	3000
1 1/4	1.2500	3	0.0100	0.0140	0.0180	41.3	127	495	1375	3025	9168	450	1200	3000



ALUMINUM EXTENDED SERIES

"SCEL" & "BSCEL" *Swift-CARB*_{CNC™} End Mills

The *Swift-CARB*_{CNC™} manufactured end mill is a high performance, high helix tool, which has tighter control and tolerances on circle ground margins, double rake polished flutes, and micro finishes. Increased speeds are obtainable with *Swift-CARB*_{CNC™}, allowing you to remove material up to 10 times faster. This means increased productivity and higher profits off your shop floor. The *Swift-CARB*_{CNC™} End Mill is designed for slotting, profiling, and ramping at high speeds and feeds in long reach applications, which makes it perfect for the machining of nonferrous materials (Aluminum, Plastics, and Copper Alloys).



MADE IN USA

- Runs 50% to 300% faster in Aluminum
- 2 Flute Square and Ball End Mills Available
- Regular, Medium, Long, X-Long Lengths
- Longer Tool Life
- High Speed Machining
- Greater Feed Rates
- Better Chip Evacuation
- Less Tool Deflection
- Leaves Superior Finishes

Series "SCEL" 2FL Aluminum Feeds and Speeds													
DIA.		Chip Load Per Tooth			FEED I.P.M.			R.P.M.			S.F.P.M.		
		PERIPHERAL HEAVY	PERIPHERAL LIGHT	FINISHING	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
1/8	0.1250	0.0012	0.0016	0.0020	33.0	32	122	13752	10085	30560	450	400	1000
3/16	0.1875	0.0020	0.0022	0.0024	36.7	30	98	9168	6723	20373	450	400	1000
1/4	0.2500	0.0027	0.0034	0.0040	37.4	51	183	6876	7564	22920	450	600	1500
5/16	0.3125	0.0032	0.0042	0.0052	35.2	51	191	5501	6051	18336	450	600	1500
3/8	0.3750	0.0040	0.0052	0.0064	36.7	70	261	4584	6723	20373	450	800	2000
7/16	0.4375	0.0044	0.0062	0.0080	34.6	82	321	3929	6627	20082	450	920	2300
1/2	0.5000	0.0048	0.0072	0.0096	33.0	91	367	3438	6303	19100	450	1000	2500
5/8	0.6250	0.0060	0.0082	0.0104	33.0	83	318	2750	5042	15280	450	1000	2500
3/4	0.7500	0.0064	0.0092	0.0120	29.3	85	336	2292	4622	14007	450	1100	2750
1	1.0000	0.0072	0.0108	0.0144	24.8	82	330	1719	3782	11460	450	1200	3000



STANDARD END MILLS

SERIES "CM", "CS" & "BM" *Swift-CARB*^{CNC™} END MILLS MICROGRAIN CARBIDE

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HIGH PERFORMANCE
CARBIDE TOOLS

Excellent value from New Tech. Our lines of PREMIUM quality carbide end mills are the perfect beginning to your manufacturing process. High accuracy with close tolerances, they deliver the precision you demand. One of the best advantages with these end mills is that they can be preground to the radii that fits your needs - AT COMPETITIVE PRICES!

- Available in 2 & 4 Flute
- Stub, Regular, Medium, Long, X-Long Lengths
- High Accuracy with close tolerances
- AlTiN (20C) and TiCN (30C) available
- Easy Chip Removal



Series "CM", "BM", "CME", & "BME" 2&4 FL Feeds and Speeds

Low Alloy Steel, Ductile Steels, Cast Irons, Copper

DIA.	Chip Load Per Tooth			2FL FEED I.P.M.			4FL FEED I.P.M.			R.P.M.			S.F.P.M.					
	FULL SLOTTING	MEDIUM PERIPHERAL	FINISHING	FL	LOW	MID	HIGH	FL	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	
1/8	0.1250	0.0006	0.0009	0.0012	2	7.3	8	32	4	14.7	16	64	6112	4538	13752	200	225	450
5/32	0.1562	0.0008	0.0012	0.0016	2	7.8	9	36	4	15.7	18	71	4891	3632	11005	200	225	450
3/16	0.1875	0.0010	0.0014	0.0018	2	8.1	8	33	4	16.3	17	66	4075	3025	9168	200	225	450
7/32	0.2188	0.0015	0.0018	0.0022	2	10.5	9	34	4	21.0	19	68	3493	2593	7858	200	225	450
1/4	0.2500	0.0017	0.0021	0.0025	2	10.4	10	35	4	20.8	19	69	3056	2269	6876	200	225	450
9/32	0.2183	0.0019	0.0023	0.0027	2	13.3	12	43	4	26.6	24	85	3501	2599	7876	200	225	450
5/16	0.3125	0.0021	0.0026	0.0031	2	10.3	9	34	4	20.5	19	67	2445	1815	5501	200	225	450
11/32	0.3438	0.0022	0.0028	0.0033	2	9.8	9	33	4	19.6	18	67	2223	1650	5001	200	225	450
3/8	0.3750	0.0025	0.0031	0.0037	2	10.2	9	34	4	20.4	19	68	2037	1513	4584	200	225	450
7/16	0.4375	0.0027	0.0035	0.0043	2	9.4	9	34	4	18.9	18	68	1746	1297	3929	200	225	450
1/2	0.5000	0.0030	0.0040	0.0050	2	9.2	9	34	4	18.3	18	68	1528	1135	3438	200	225	450
5/8	0.6250	0.0040	0.0049	0.0059	2	9.8	9	32	4	19.6	18	64	1222	908	2750	200	225	450
3/4	0.7500	0.0045	0.0058	0.0070	2	9.2	9	32	4	18.3	17	64	1019	756	2292	200	225	450
1	1.0000	0.0060	0.0080	0.0099	2	9.2	9	34	4	18.3	18	68	764	567	1719	200	225	450
1 1/4	1.2500	0.0070	0.0089	0.0108	2	8.6	8	30	4	17.1	16	59	611	454	1375	200	225	450

Series "CM", "BM", "CME", & "BME" 2&4 FL Feeds and Speeds

Stainless Steel (Precipitation)15-5PH, 17-4PH, Die and Mold Steels P-20, High Strength Alloys 40XX, 41XX, 42XX, 43XX, 44XX, 46XX, 86XX

DIA.	Chip Load Per Tooth			2 FL FEED I.P.M.			4 FL FEED I.P.M.			R.P.M.			S.F.P.M.					
	FULL SLOTTING	MEDIUM PERIPHERAL	FINISHING	FL	LOW	MID	HIGH	FL	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	
1/8	0.1250	0.0006	0.0009	0.0012	2	3.1	5	20	4	6.2	10	39	2598	2773	8404	85	137.5	275
5/32	0.1562	0.0008	0.0011	0.0014	2	3.3	5	18	4	6.7	10	36	2079	2219	6725	85	137.5	275
3/16	0.1875	0.0009	0.0013	0.0016	2	3.1	5	18	4	6.2	9	36	1732	1849	5603	85	137.5	275
7/32	0.2188	0.0010	0.0016	0.0022	2	3.0	5	21	4	5.9	10	41	1484	1585	4802	85	137.5	275
1/4	0.2500	0.0014	0.0020	0.0025	2	3.6	5	21	4	7.3	11	42	1299	1387	4202	85	137.5	275
9/32	0.2183	0.0015	0.0021	0.0027	2	4.5	7	26	4	8.9	13	52	1488	1588	4813	85	137.5	275
5/16	0.3125	0.0018	0.0023	0.0028	2	3.7	5	19	4	7.5	10	38	1039	1109	3362	85	137.5	275
11/32	0.3438	0.0019	0.0025	0.0032	2	3.6	5	19	4	7.2	10	39	945	1008	3056	85	137.5	275
3/8	0.3750	0.0021	0.0028	0.0034	2	3.6	5	19	4	7.3	10	38	866	924	2801	85	137.5	275
7/16	0.4375	0.0025	0.0033	0.0041	2	3.7	5	19	4	7.4	10	39	742	792	2401	85	137.5	275
1/2	0.5000	0.0030	0.0038	0.0045	2	3.9	5	19	4	7.8	10	38	649	693	2101	85	137.5	275
5/8	0.6250	0.0035	0.0045	0.0054	2	3.6	5	18	4	7.3	10	36	520	555	1681	85	137.5	275
3/4	0.7500	0.0040	0.0052	0.0064	2	3.5	5	18	4	6.9	10	36	433	462	1401	85	137.5	275
1	1.0000	0.0060	0.0075	0.0090	2	3.9	5	19	4	7.8	10	38	325	347	1051	85	137.5	275
1 1/4	1.2500	0.0065	0.0087	0.0108	2	3.0	6	21	4	6.0	11	43	229	328	993	75	137.5	325



STANDARD END MILLS

SERIES "CM", "CS" & "BM" *Swift-CARB*^{CNC™} END MILLS MICROGRAIN CARBIDE

MADE IN USA

- Available in 2 & 4 Flute
- Stub, Regular, Medium, Long, X-Long Lengths
- High Accuracy with close tolerances
- AlTiN (20C) and TiCN (30C) available
- Easy Chip Removal



Series "CM", "BM", "CME", & "BME" 2&4 FL Feeds and Speeds																		
Stainless Steels (Austenitic) 303, 304, 304L, 312, 316, 316L																		
DIA.	Chip Load Per Tooth			2 FL FEED I.P.M.			4 FL FEED I.P.M.			R.P.M.			S.F.P.M.					
	FULL SLOTTING	MEDIUM PERIPHERAL	FINISHING	FL	LOW	MID	HIGH	FL	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	
1/8	0.1250	0.0006	0.0009	0.0012	2	3.1	5	21	4	6.2	11	43	2598	3025	9168	85	150	300
5/32	0.1562	0.0008	0.0011	0.0014	2	3.3	5	20	4	6.7	10	40	2079	2421	7337	85	150	300
3/16	0.1875	0.0009	0.0013	0.0016	2	3.1	5	20	4	6.2	10	40	1732	2017	6112	85	150	300
7/32	0.2188	0.0010	0.0016	0.0022	2	3.0	5	23	4	5.9	11	45	1484	1729	5239	85	150	300
1/4	0.2500	0.0014	0.0020	0.0025	2	3.6	6	23	4	7.3	12	46	1299	1513	4584	85	150	300
9/32	0.2183	0.0015	0.0021	0.0027	2	4.5	7	28	4	8.9	15	57	1488	1733	5251	85	150	300
5/16	0.3125	0.0018	0.0023	0.0028	2	3.7	6	20	4	7.5	11	41	1039	1210	3667	85	150	300
11/32	0.3438	0.0019	0.0025	0.0032	2	2.6	5	21	4	5.3	10	42	945	1100	3334	85	150	300
3/8	0.3750	0.0021	0.0028	0.0034	2	3.6	6	21	4	7.3	11	42	866	1008	3056	85	150	300
7/16	0.4375	0.0025	0.0033	0.0041	2	3.7	6	21	4	7.4	11	42	742	864	2619	85	150	300
1/2	0.5000	0.0030	0.0038	0.0045	2	3.9	6	21	4	7.8	11	41	649	756	2292	85	150	300
5/8	0.6250	0.0035	0.0045	0.0054	2	3.6	5	20	4	7.3	11	40	520	605	1834	85	150	300
3/4	0.7500	0.0040	0.0052	0.0064	2	3.5	5	20	4	6.9	10	39	433	504	1528	85	150	300
1	1.0000	0.0060	0.0075	0.0090	2	3.9	6	21	4	7.8	11	41	325	378	1146	85	150	300
1 1/4	1.2500	0.0065	0.0087	0.0108	2	3.4	5	20	4	6.8	10	40	260	303	917	85	150	300

Series "CM", "BM", "CME", & "BME" 2&4 FL Feeds and Speeds																		
High Temp Alloys (Nickel and Cobalt Based) Titanium Alloys, Waspalloy, Inconel																		
DIA.	Chip Load Per Tooth			2 FL FEED I.P.M.			4 FL FEED I.P.M.			R.P.M.			S.F.P.M.					
	FULL SLOTTING	MEDIUM PERIPHERAL	FINISHING	FL	LOW	MID	HIGH	FL	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	
1/8	0.1250	0.0005	0.0008	0.0012	2	1.2	3	13	4	2.4	6	25	1222	1765	5348	40	87.5	175
5/32	0.1562	0.0006	0.0010	0.0014	2	1.2	3	12	4	2.3	6	23	978	1412	4280	40	87.5	175
3/16	0.1875	0.0007	0.0012	0.0016	2	1.1	3	12	4	2.3	5	23	815	1177	3565	40	87.5	175
7/32	0.2188	0.0008	0.0013	0.0017	2	1.1	3	10	4	2.2	5	21	699	1008	3056	40	87.5	175
1/4	0.2500	0.0010	0.0014	0.0018	2	1.2	2	10	4	2.4	5	19	611	882	2674	40	87.5	175
9/32	0.2183	0.0011	0.0016	0.0021	2	1.5	3	13	4	3.1	6	25	700	1011	3063	40	87.5	175
5/16	0.3125	0.0012	0.0017	0.0023	2	1.2	2	10	4	2.3	5	19	489	706	2139	40	87.5	175
11/32	0.3438	0.0013	0.0019	0.0025	2	1.2	2	10	4	2.3	5	20	445	642	1945	40	87.5	175
3/8	0.3750	0.0014	0.0021	0.0027	2	1.1	2	10	4	2.3	5	19	407	588	1783	40	87.5	175
7/16	0.4375	0.0017	0.0024	0.0032	2	1.2	2	10	4	2.4	5	19	349	504	1528	40	87.5	175
1/2	0.5000	0.0020	0.0028	0.0036	2	1.2	2	10	4	2.4	5	19	306	441	1337	40	87.5	175
5/8	0.6250	0.0024	0.0034	0.0043	2	1.2	2	9	4	2.3	5	18	244	353	1070	40	87.5	175
3/4	0.7500	0.0030	0.0042	0.0054	2	1.2	2	10	4	2.4	5	19	204	294	891	40	87.5	175
1	1.0000	0.0035	0.0054	0.0072	2	1.1	2	10	4	2.1	5	19	153	221	669	40	87.5	175
1 1/4	1.2500	0.0040	0.0061	0.0081	2	1.0	2	9	4	2.0	4	17	122	176	535	40	87.5	175



SUPERBEE®

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Productivity Profits Your Future!

GRADE APPLICATION CHART

T520 AlTiN coating on NT56. AlTiN is a high performance coating which excels at machining of abrasive and difficult-to-machine materials, such as cast iron, aluminum alloys, tool steels, and nickel alloys. Its superior oxidation resistance provides unparalleled performance in high temperature machining. This coating should be targeted at applications that generate the highest heat level at the tools cutting edge.

T530 TiCN coating on NT56. Designed for added wear resistance when milling steels, stainless steels, and cast iron.

NT33 Uncoated grade for general purpose milling of aluminum, brass, cast iron, and all non-ferrous materials. Excellent strength and wear resistance.

NT56 Uncoated carbide with extreme edge strength. Designed for general purpose milling of steels and cast irons. Ideal for stainless steels, and difficult machining conditions such as interrupted cutting.

NT13 Uncoated carbide grade suitable for machining of nickel base alloys.

NC57 Cermet, a Titanium Nitride, Carbide, Tantalum composite for milling steels. Good balance of wear resistance and toughness.

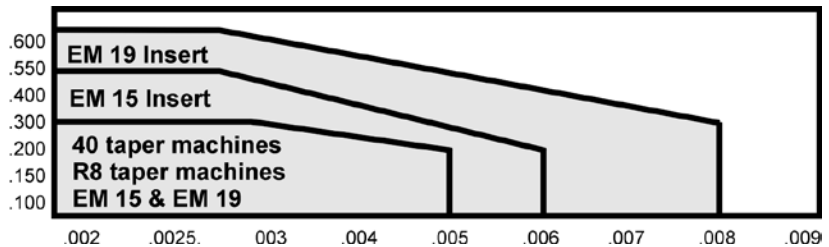
USA	ISO	UN COATED	COATED	CERMET	USA	ISO	UN COATED	COATED	CERMET
C8	P01				C4	K01			
C7	P10		T 5 3 0	NC 5 7	C3	K10	NT 3 3	T 5 3 0	NC 5 7
C6	P20	NT 5 6	T 5 2 0		C2	K20	NT 1 3	T 5 2 0	
C5	P30				C1	K30			
	P40								

RECOMMENDED CUTTING CONDITIONS

Material	RC Hardness	Grade	Cutting Speed (feet/min)	Feed In/Tooth
Mild Steel	-	T520/T530 NT56	500-1100	.003-.008
Carbon Steel	-	T520/T530 NT56	500-1000	.003-.008
Alloy Steel	36 & Under 37 - 45	T520 T530	450-850 350-650	.003-.006
Stainless Steel	35 & Under	T520/T530 NT56	325-850	.003-.005
300 Series		T520/T530 NT56	325-550	.003-.005
PH Stainless	33 & Under	T520/T530 NT56	450-700	.002-.004
15-5 17-4	34-40	T520/T530 NT56	325-650	.002-.004
Die & Mold Stl.	33 & Under	T520/T530	450-750	.003-.006
P20 H13	34-42	NT56	350-550	.004-.008
Cast Iron		NT56/NT33 T530/T520	275-750	.004-.008
Aluminum		NT33/T520	900-3200	.004-.008

ALWAYS CLIMB CUT. USE NEW-LUBE® LUBRICANT, AIR BLAST OR DRY. FLOOD COOLANT MAY BE USEFUL FOR CUTTING UNDER 300 SFPM.

D.O.C.



SUPERBEE®

CUTTER BODY NOMENCLATURE

SUPERBEE® INDEXABLE FORM CUTTERS		
BE = 90° SHOULDER MILLING CUTTER	DIAMETER IN 64ths OF AN INCH	
BB = BALL	40 = 5/8"	128 = 2"
BC = LARGE CONCAVE RADIUS CUTTER	48 = 3/4"	144 = 2-1/4"
BD = BACKDRAFT CUTTER	56 = 7/8"	160 = 2-1/2"
BBD = BACKDRAFT BALL END CUTTER	64 = 1"	192 = 3"
CB = COUNTERBORE	80 = 1-1/4"	224 = 3-1/2"
CM = CHAMFER/ANGLE SHELL MILL	96 = 1-1/2"	320 = 5"
CMS = CHAMFER/ANGLE MILL		
	# OF CUTTING TEETH/FLUTES	
	5/8" - 1FL	1-1/4" - 2FL to 3FL
	3/4" - 1FL	1-1/2" - 2FL to 3FL
	1" - 1FL to 2FL	
	SHELL MILLS - 3FL TO 6 FL	

1
 2
 3

BE 64 2 15 64 R1.©

4	5	6
INSERT TYPE 14 = EM14 21 = SD21.5 15 = EM15 22 = SD22 18 = EM18 32 = SP32 19 = EM19 42 = SP42	SHANK TYPE DIA. OR ARBOR HOLE IN 64ths OF AN INCH 40 = 5/8" 48 = 3/4" SHK/ARBOR HOLE 64 = 1" 80 = 1-1/4" R8 = R8 TAPER SHANK	ANGLE, RADIUS, OR BALL SERIES A10 through A60 = ANGLE C1 through C6 = CONCAVE RADIUS T&BC# = Top & Bottom Concave R1 to R8 = CONVEX RADIUS***

Please Note:

Each **SUPERBEE®** cutter with a **Concave Radius C SERIES** allows for a range of radii. For example, Catalog Item Number **BE6411964C6** can support an insert with radii ranging from .236 to .250. Ranges listed below.

C # = CONCAVE RADIUS RANGE	
C 1 ACCOMMODATES CONCAVE RADII FROM .010" TO .060"	C 4 ACCOMMODATES CONCAVE RADII FROM .170" TO .190"
C 2 ACCOMMODATES CONCAVE RADII FROM .070" TO .125"	C 5 ACCOMMODATES CONCAVE RADII FROM .197" TO .220"
C 3 ACCOMMODATES CONCAVE RADII FROM .130" TO .160"	C 6 ACCOMMODATES CONCAVE RADII FROM .236" TO .250"

SUPERBEE® Angle Cutters. Each **SUPERBEE®** Angle Cutter will accommodate only **one style angle insert**. For example, if you need a 1" single flute cutter with a 1" shank and a 45° per side angle, the part number would be **BE6411964A45**

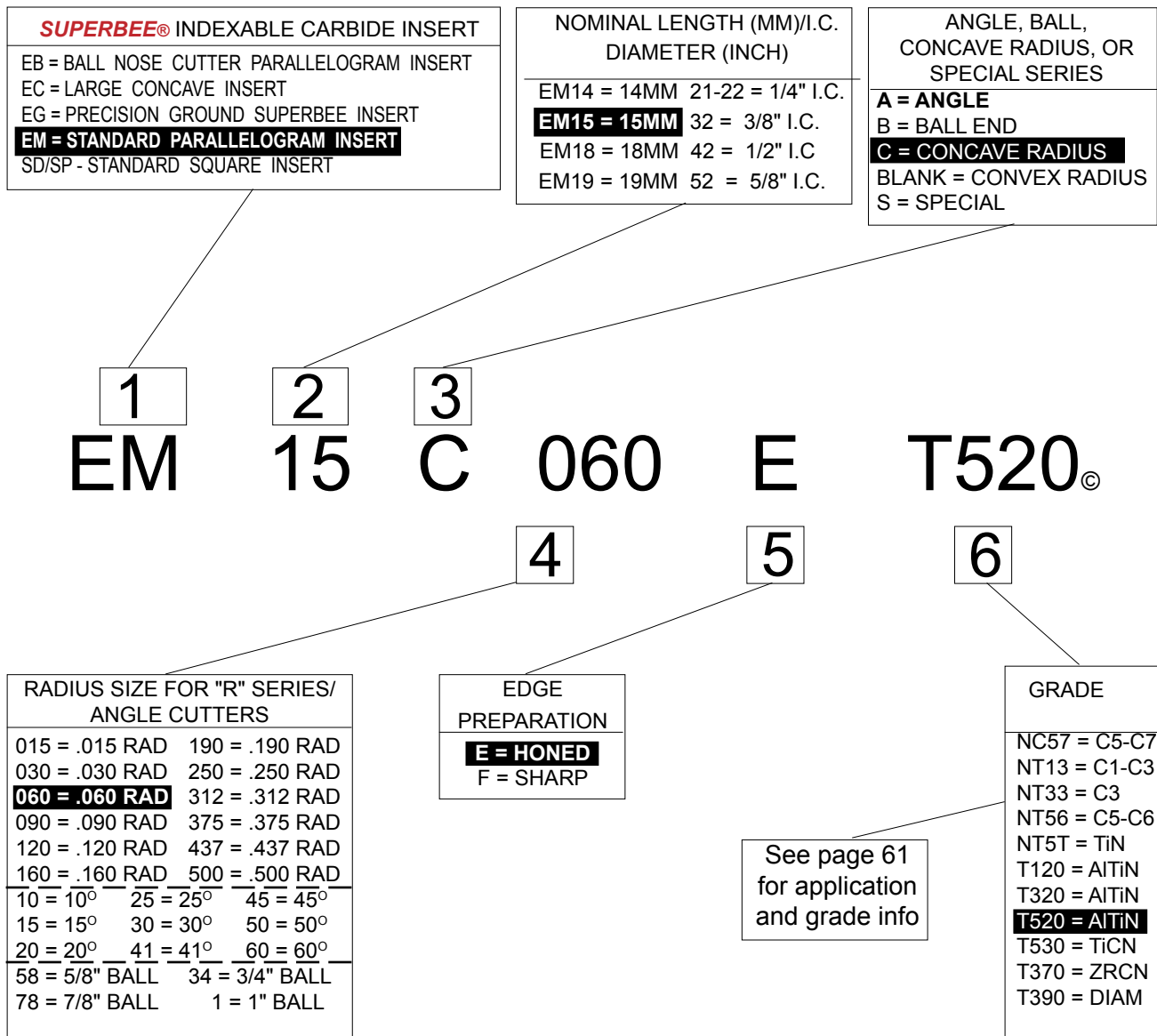
SUPERBEE® Convex Radius R SERIES. R1, R2, R3, and R4 cutters will cut a range of radii. For example, BE6421564R1 will accommodate cutting of .007" to .060" radii. BE8031580R4 will accommodate cutting of .200" to .250" radii. However, R5, R6, R7, and R8 cutters will only cut a specific radius. That is, BE5611948R6 accommodates a .375" radius only. The chart below is for R Series Cutter Radii:

R # = CONVEX RADIUS RANGE	
R 1 ACCOMMODATES CONVEX RADII FROM .007" TO .060"	R 5 ACCOMMODATES A .312" CONVEX RADIUS ONLY
R 2 ACCOMMODATES CONVEX RADII FROM .070" TO .130"	R 6 ACCOMMODATES A .375" CONVEX RADIUS ONLY
R 3 ACCOMMODATES CONVEX RADII FROM .140" TO .190"	R 7 ACCOMMODATES A .437" CONVEX RADIUS ONLY
R 4 ACCOMMODATES CONVEX RADII FROM .200" TO .250"	R 8 ACCOMMODATES A .500" CONVEX RADIUS ONLY



SUPERBEE®

INSERT NOMENCLATURE



Please Note:

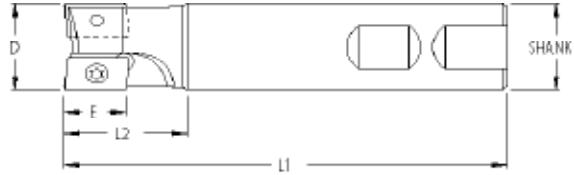
SUPERBEE® Inserts are not interchangeable unless you are using an R1 through R4 SERIES cutter. This means that if you have purchased an R5 through R8 cutter then you must use that specified radius ONLY. If you have purchased an angle cutter that cuts a 30° angle you will need an insert that cuts a 30° angle. If you have purchased a concave radius cutter that cuts a .250" radius you will need an insert that cuts a .250" concave radius.

Additionally, cutters are not made to cut convex, angle, and concave radii all from one insert. Each insert is specific to the geometry it will cut. If you purchase a convex cutter then you need a convex insert that matches the radius you need to cut. The same goes for angle cutters and concave cutters. You will need to purchase the specific insert for that cutter.



SERIES R1

CONVEX RADIUS .007-.060 WELDON SHANK



MADE IN USA

SUPERBEE® MADE IN AMERICA

R1	ACCOMMODATES RADII FROM .007" TO .060"	LARGER RADII FOUND ON NEXT PAGE.
----	--	----------------------------------

SEE NEXT PAGE FOR RADII .070 THROUGH .500

WELDON SHANK SERIES R1

PART NUMBER	D	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BE4011540R1	0.625	0.625	3.375	1.000	1	0.625	EM15	\$86.35
BE4011540R12M	0.625	0.625	4.250	2.000	1	0.625	EM15	\$426.40
BE4011540R13M	0.625	0.625	4.750	3.000	1	0.625	EM15	\$457.60
BE4411548R1	0.687	0.750	4.000	1.250	1	0.625	EM15	\$113.85
BE4811548R1	0.750	0.750	4.000	1.250	1	0.625	EM15	\$101.92
BE4811548R1225M	0.750	0.750	4.750	2.250	1	0.625	EM15	\$442.74
BE4811548R13M	0.750	0.750	5.500	3.000	1	0.625	EM15	\$457.60
BE4811548R135M	0.750	0.750	6.000	3.500	1	0.625	EM15	\$482.33
BE5611948R1	0.875	0.750	4.500	1.250	1	0.750	EM19	\$125.95
BE5611964R1	0.875	1.000	4.500	1.250	1	0.750	EM19	\$113.85
BE6411948R1	1.000	0.750	4.500	1.250	1	0.750	EM19	\$125.95
BE6411964R1	1.000	1.000	4.500	1.250	1	0.750	EM19	\$107.80
BE6411964R12M	1.000	1.000	4.500	2.000	1	0.750	EM19	\$488.80
BE6411964R13M	1.000	1.000	5.500	3.000	1	0.750	EM19	\$547.43
BE6411964R14M	1.000	1.000	6.500	4.000	1	0.750	EM19	\$581.66
BE6411964R15M	1.000	1.000	7.500	5.000	1	0.750	EM19	\$632.90
BE6421548R1	1.000	0.750	4.500	1.250	2	0.625	EM15	\$155.87
BE6421564R1	1.000	1.000	4.500	1.250	2	0.625	EM15	\$137.50
BE6421564R12M	1.000	1.000	4.500	2.000	2	0.625	EM15	\$518.51
BE6421564R13M	1.000	1.000	5.500	3.000	2	0.625	EM15	\$569.02
BE6421564R14M	1.000	1.000	6.500	4.000	2	0.625	EM15	\$626.22
BE6421564R15M	1.000	1.000	7.500	5.000	2	0.625	EM15	\$655.20
BE8021980R1	1.250	1.250	5.000	1.750	2	0.750	EM19	\$167.20
BE8021980R13M	1.250	1.250	5.500	3.000	2	0.750	EM19	\$647.76
BE8021980R14M	1.250	1.250	6.500	4.000	2	0.750	EM19	\$722.05
BE8021980R15M	1.250	1.250	7.500	5.000	2	0.750	EM19	\$892.16
BE8021980R16M	1.250	1.250	8.500	6.000	2	0.750	EM19	\$932.28
BE8031580R1	1.250	1.250	5.000	1.750	3	0.625	EM15	\$209.83
BE9621980R1	1.500	1.250	5.000	1.750	2	0.750	EM19	\$184.53
BE9621980R13M	1.500	1.250	5.000	3.000	2	0.750	EM19	\$708.68
BE9621980R14M	1.500	1.250	5.500	4.000	2	0.750	EM19	\$783.71
BE9621980R15M	1.500	1.250	6.500	5.000	2	0.750	EM19	\$866.16
BE9621980R16M	1.500	1.250	7.500	6.000	2	0.750	EM19	\$1,294.05
BE9621980R17M	1.500	1.250	8.500	7.000	2	0.750	EM19	\$1,440.40
BE9631580R1	1.500	1.250	5.000	1.750	3	0.625	EM15	\$213.40

INSERTS FOR THESE CUTTERS ARE ON PAGE 74

SPARE PARTS:

ALL EM15 INSERTS
SCREW: BS15
WRENCH: BW15

ALL EM19 INSERTS
SCREW: BS19
WRENCH: BW19

Order Example:
Need a 3/4 inch tool to cut a .030 radius? Your order number would be BE4811548R1



Left hand, metric sizes, and specials available on request.

M = DENOTES MACHINABLE CARBIDE SHANK
MACHINABLE CARBIDE CUTTERS ARE MADE TO ORDER AND ARE **NOT** RETURNABLE.
E = APPROXIMATE LENGTH

MADE IN USA

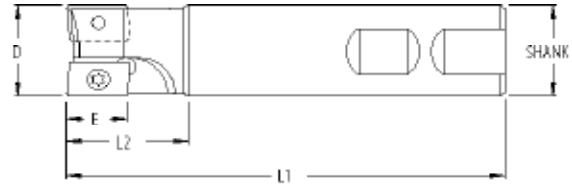
SUPERBEE® INDEXABLE TOOL HOLDERS AND INSERTS

70



SERIES R2 TO R8

CONVEX RADIUS .070-.500 WELDON SHANK



MADE IN **USA**

SUPERBEE® MADE IN AMERICA

# = RADIUS RANGE	R 5	ACCOMMODATES A .312" RADIUS ONLY
R 2	R 6	ACCOMMODATES A .375" RADIUS ONLY
R 3	R 7	ACCOMMODATES A .437" RADIUS ONLY
R 4	R 8	ACCOMMODATES A .500" RADIUS ONLY

SEE ABOVE FOR CORRECT RADIUS DESIGNATION

WELDON SHANK SERIES R2 - R8

PART NUMBER	D	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BE4011540R#	0.625	0.625	3.375	1.000	1	0.625	EM15	\$96.80
BE4011540R#2M	0.625	0.625	4.250	2.000	1	0.625	EM15	440.51
BE4011540R#3M	0.625	0.625	4.750	3.000	1	0.625	EM15	471.71
BE4411548R#	0.687	0.750	4.000	1.250	1	0.625	EM15	124.30
BE4811548R#	0.750	0.750	4.000	1.250	1	0.625	EM15	112.20
BE4811548R#225M	0.750	0.750	4.750	2.250	1	0.625	EM15	386.57
BE4811548R#3M	0.750	0.750	5.500	3.000	1	0.625	EM15	471.72
BE4811548R#35M	0.750	0.750	6.000	3.500	1	0.625	EM15	496.22
BE5611948R#	0.875	0.750	4.500	1.250	1	0.750	EM19	139.34
BE5611964R#	0.875	1.000	4.500	1.250	1	0.750	EM19	124.30
BE6411948R#	1.000	0.750	4.500	1.250	1	0.750	EM19	136.40
BE6411964R#	1.000	1.000	4.500	1.250	1	0.750	EM19	118.25
BE6411964R#2M	1.000	1.000	4.500	2.000	1	0.750	EM19	502.91
BE6411964R#3M	1.000	1.000	5.500	3.000	1	0.750	EM19	561.60
BE6411964R#4M	1.000	1.000	6.500	4.000	1	0.750	EM19	595.02
BE6411964R#5M	1.000	1.000	7.500	5.000	1	0.750	EM19	647.02
BE6421548R#	1.000	0.750	4.500	1.250	2	0.625	EM15	166.10
BE6421564R#	1.000	1.000	4.500	1.250	2	0.625	EM15	147.95
BE6421564R#2M	1.000	1.000	4.500	2.000	2	0.625	EM15	532.62
BE6421564R#3M	1.000	1.000	5.500	3.000	2	0.625	EM15	583.14
BE6421564R#4M	1.000	1.000	6.500	4.000	2	0.625	EM15	559.65
BE6421564R#5M	1.000	1.000	7.500	5.000	2	0.625	EM15	585.00
BE8021980R#	1.250	1.250	5.000	1.750	2	0.750	EM19	177.10
BE8021980R#3M	1.250	1.250	5.500	3.000	2	0.750	EM19	484.07
BE8021980R#4M	1.250	1.250	6.500	4.000	2	0.750	EM19	644.15
BE8021980R#5M	1.250	1.250	7.500	5.000	2	0.750	EM19	792.35
BE8021980R#6M	1.250	1.250	8.500	6.000	2	0.750	EM19	945.28
BE8031580R#	1.250	1.250	5.000	1.750	3	0.625	EM15	220.00
BE9621980R#	1.500	1.250	5.000	1.750	2	0.750	EM19	194.70
BE9621980R#3M	1.500	1.250	5.000	1.750	2	0.750	EM19	632.45
BE9621980R#4M	1.500	1.250	5.500	3.000	2	0.750	EM19	797.82
BE9621980R#5M	1.500	1.250	6.500	4.000	2	0.750	EM19	879.54
BE9621980R#6M	1.500	1.250	7.500	5.000	2	0.750	EM19	1307.42
BE9621980R#7M	1.500	1.250	8.500	6.000	2	0.750	EM19	1454.52
BE9631580R#	1.500	1.250	5.000	1.750	3	0.625	EM15	223.30

INSERTS FOR THESE CUTTERS ARE ON PAGE 74

SPARE PARTS:

ALL EM15 INSERTS
SCREW: **BS15**
WRENCH: **BW15**

ALL EM19 INSERTS
SCREW: **BS19**
WRENCH: **BW19**

Order Example:
Need a 3/4 inch tool to cut a .140 radius? Your order number would be **BE4811548R3**



Left hand, metric sizes, and specials available on request.

SUPERBEE® INDEXABLE TOOL HOLDERS AND INSERTS

71

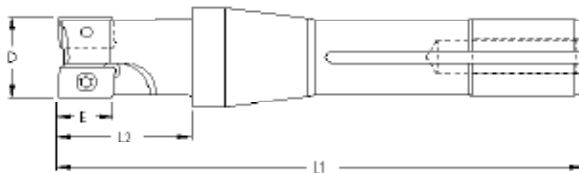
= RADIUS RANGE
M = DENOTES MACHINABLE CARBIDE SHANK
MACHINABLE CARBIDE CUTTERS ARE MADE TO ORDER AND ARE NOT RETURNABLE.
E = APPROXIMATE LENGTH

MADE IN **USA**



SERIES R1 - R8

CONVEX RADIUS .007-.500 R8 SHANK



MADE IN USA

R8 SHANK SERIES R1

PART NUMBER	D	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BE64215R8R1	1.000	R8	5.880	1.500	2	0.625	EM15	\$179.30
BE80219R8R1	1.250	R8	6.130	1.750	2	0.750	EM19	\$191.40
BE96315R8R1	1.500	R8	6.130	1.750	3	0.625	EM15	\$237.60

INSERTS FOR THESE CUTTERS ARE ON PAGE 74

SPARE PARTS:

ALL EM15 INSERTS
SCREW: **BS15**
WRENCH: **BW15**

ALL EM19 INSERTS
SCREW: **BS19**
WRENCH: **BW19**

R8 SHANK SERIES R2 TO R8 SEE PAGE 43 FOR CORRECT RADIUS DESIGNATION

PART NUMBER	D	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BE64215R8R#	1.000	R8	5.880	1.500	2	0.625	EM15	\$199.10
BE80219R8R#	1.250	R8	6.130	1.750	2	0.750	EM19	\$211.20
BE96315R8R#	1.500	R8	6.130	1.750	3	0.625	EM15	\$257.40

INSERTS FOR THESE CUTTERS ARE ON PAGE 74



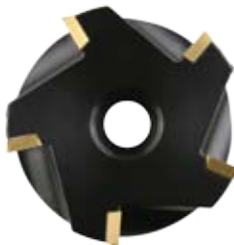
Left hand, metric sizes, and specials

SUPERBEE® MADE IN AMERICA

SERIES R1 - R8 CONVEX RADIUS .007-.500 SHELL MILLS



MADE IN USA



SHELL MILLS SERIES R1

PART NUMBER	D	AH	L1	FLUTES	E	INSERT	LIST
BE12831948R1	2.000	0.750	1.825	3	0.750	EM19	\$215.60
BE12851548R1	2.000	0.750	1.825	5	0.625	EM15	\$293.70
BE14451548R1	2.250	0.750	1.825	5	0.625	EM15	\$305.80
BE16031948R1	2.500	0.750	1.825	3	0.750	EM19	\$264.00
BE16051548R1	2.500	0.750	1.825	5	0.625	EM15	\$317.90
BE19261564R1	3.000	1.000	1.825	6	0.625	EM15	\$335.50
BE22461580R1	3.500	1.250	1.825	6	0.625	EM15	\$357.50

INSERTS FOR THESE CUTTERS ARE ON PAGE 74

MADE IN USA

SHELL MILLS SERIES R2 TO R8 SEE PAGE 43 FOR CORRECT RADIUS DESIGNATION

PART NUMBER	D	AH	L1	FLUTES	E	INSERT	LIST
BE12831948R#	2.000	0.750	1.825	3	0.750	EM19	\$226.05
BE12851548R#	2.000	0.750	1.825	5	0.625	EM15	\$310.20
BE14451548R#	2.250	0.750	1.825	5	0.625	EM15	\$322.30
BE16031948R#	2.500	0.750	1.825	3	0.750	EM19	\$280.50
BE16051548R#	2.500	0.750	1.825	5	0.625	EM15	\$334.40
BE19261564R#	3.000	1.000	1.825	6	0.625	EM15	\$352.55
BE22461580R#	3.500	1.250	1.825	6	0.625	EM15	\$374.00

INSERTS FOR THESE CUTTERS ARE ON PAGE 74

SPARE PARTS:

ALL EM15 INSERTS
SCREW: **BS15**
WRENCH: **BW15**

ALL EM19 INSERTS
SCREW: **BS19**

= RADIUS RANGE
E = APPROXIMATE LENGTH

SUPERBEE® INDEXABLE TOOL HOLDERS AND INSERTS

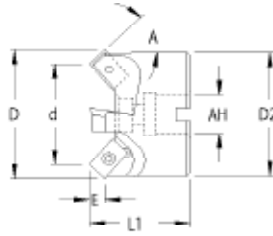
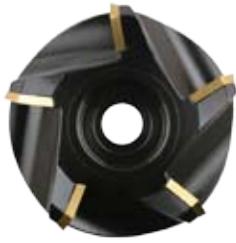
72



SERIES IS

- INSERT SAVERS

SUPERBEE® MADE IN AMERICA



INSERT SAVER®

PART NUMBER	D	d	D2	AH	L1	LEAD	FLUTES	E	INSERT	LIST
BE12831548A45IS	2.505	2.000	2.403	0.750	1.750	45°	3	0.265	EM15	\$251.90
BE12831948A45IS	2.678	2.000	2.537	0.750	1.750	45°	3	0.350	EM19	\$251.90
BE16031548A15IS	2.675	2.500	2.660	0.750	1.750	15°	3	0.360	EM15	\$281.60
BE16031564A15IS	2.675	2.500	2.660	1.000	1.750	15°	3	0.360	EM15	\$281.60
BE16031548A45IS	3.005	2.500	2.903	0.750	1.750	45°	3	0.265	EM15	\$281.60
BE16031564A45IS	3.005	2.500	2.903	1.000	1.750	45°	3	0.265	EM15	\$281.60
BE16031948A15IS	2.750	2.500	2.715	0.750	1.750	15°	3	0.480	EM19	\$281.60
BE16031964A15IS	2.750	2.500	2.715	1.000	1.750	15°	3	0.480	EM19	\$281.60
BE16031948A45IS	3.178	2.500	3.037	0.750	1.750	45°	3	0.350	EM19	\$281.60
BE16031964A45IS	3.178	2.500	3.037	1.000	1.750	45°	3	0.350	EM19	\$281.60
BE19251564A45IS	3.678	3.000	3.537	1.000	1.750	45°	5	0.265	EM15	\$345.40
BE32051980A45IS	5.678	5.000	5.537	1.250	2.000	45°	5	0.350	EM19	\$610.50

INSERTS FOR THESE CUTTERS ARE ON PAGE 74

MADE IN USA

INSERT SAVER®

These shell mills utilize the insert edges that other cutters can't. Get more mileage for your carbide dollar!

3° SERIES BD - BACKDRAFT CUTTERS



MADE IN USA



ALL OF THESE SUPERBEE® BACKDRAFT CUTTERS ACCOMMODATE ANY SUPERBEE® INSERT! CONVEX (page 47), ANGLE (page 49), and CONCAVE (page 53)

WELDON SHANK SERIES BD

PART NUMBER	D	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BD4011564R#,C#,A#,3M	0.625	1.000	5.500	3.000	1	0.625	EM15	\$566.80
BD4011564R#,C#,A#,4M	0.625	1.000	6.500	4.000	1	0.625	EM15	\$597.25
BD4811580R#,C#,A#,4M	0.750	1.250	6.500	4.000	1	0.625	EM15	\$720.56
BD4811580R#,C#,A#,5M	0.750	1.250	7.500	5.000	1	0.625	EM15	\$771.08
BD6411980R#,C#,A#,4M	1.000	1.250	6.500	4.000	1	0.750	EM19	\$630.50
BD6411980R#,C#,A#,5M	1.000	1.250	7.500	5.000	1	0.750	EM19	\$637.00
BD6411980R#,C#,A#,6M	1.000	1.250	8.500	6.000	1	0.750	EM19	\$833.30
BD6411996R#,C#,A#,8M	1.000	1.500	10.500	8.000	1	0.750	EM19	\$951.60
BD6421580R#,C#,A#,4M	1.000	1.250	6.500	4.000	2	0.625	EM15	\$644.80
BD6421580R#,C#,A#,5M	1.000	1.250	7.500	5.000	2	0.625	EM15	\$749.54
BD6421580R#,C#,A#,6M	1.000	1.250	8.500	6.000	2	0.625	EM15	\$977.60
BD6421596R#,C#,A#,8M	1.000	1.500	10.500	8.000	2	0.625	EM15	\$1,100.92
BD8021996R#,C#,A#,5M	1.250	1.500	7.500	5.000	2	0.750	EM19	\$1,027.00
BD8021996R#,C#,A#,6M	1.250	1.500	8.500	6.000	2	0.750	EM19	\$1,287.36
BD8021996R#,C#,A#,7M	1.250	1.500	9.500	7.000	2	0.750	EM19	\$1,379.48
BD8021996R#,C#,A#,8M	1.250	1.500	10.500	8.000	2	0.750	EM19	\$1,418.85
BD8021996R#,C#,A#,9M	1.250	1.500	11.500	9.000	2	0.750	EM19	\$1,430.00



Left hand, metric sizes, and specials available on request.

SPARE PARTS:

ALL EM15 INSERTS
SCREW: BS15
WRENCH: BW15

ALL EM19 INSERTS
SCREW: BS19
WRENCH: BW19

Please Specify the size convex radius, concave radius, or angle you need at the end of the order number. See the following example →

Order Example:

Need a 1" inch tool to cut either a:
A. Convex Radius #
B. Angle ##
C. Concave Radius ###

Your order number would be either:
A: BD6421564R3 (cuts .140 to a .190 convex radius)
B: BD6421564A45 (cuts a 45° angle)
C: BD6421564C6 (cuts .250 concave radius)

= RADIUS OR ## ANGLE RANGE

M = DENOTES MACHINABLE CARBIDE SHANK AND MACHINABLE CARBIDE CUTTERS ARE MADE TO ORDER AND ARE NOT RETURNABLE.

E = APPROXIMATE LENGTH

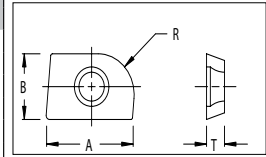
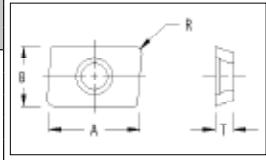
SUPERBEE® INDEXABLE TOOL HOLDERS AND INSERTS

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CONVEX RADIUS INSERTS FOR SUPERBEE®

EM15 SERIES R1-R6 CONVEX RADII **NEW!**

RANGE	INSERTS	RADIUS	A	B	T	T520	T530	NT56	NT33	NT13	NC57
						HONE=E LIST	HONE=E LIST	HONE=E LIST	HONE= E or F LIST	HONE=E LIST	HONE=E LIST
R1	EM15007	0.007	0.625	0.375	0.125	\$12.35	\$12.35	\$10.29	\$10.29	\$10.29	\$14.30
	EM15015	0.015	0.625	0.375	0.125	\$8.70	\$8.70	\$6.66	\$7.01	\$7.01	\$9.22
	EM15020	0.020	0.625	0.375	0.125	\$8.70	\$8.70	\$6.66	\$7.01	\$7.01	\$9.22
	EM15030	0.030	0.625	0.375	0.125	\$8.70	\$8.70	\$6.66	\$7.01	\$7.01	\$9.22
	EM15040	0.040	0.625	0.375	0.125	\$12.35	\$12.35	\$10.29	\$10.29	\$10.29	\$14.30
	EM15050	0.050	0.625	0.375	0.125	\$12.35	\$12.35	\$10.29	\$10.29	\$10.29	\$14.30
R2	EM15060	0.060	0.625	0.375	0.125	\$12.35	\$12.35	\$10.29	\$10.29	\$10.29	\$14.30
	EM15070	0.070	0.625	0.375	0.125	\$12.35	\$12.35	\$10.29	\$10.29	\$10.29	\$14.30
	EM15080	0.080	0.625	0.375	0.125	\$12.35	\$12.35	\$10.29	\$10.29	\$10.29	\$14.30
	EM15090	0.090	0.625	0.375	0.125	\$12.35	\$12.35	\$10.29	\$10.29	\$10.29	\$14.30
	EM15100	0.100	0.625	0.375	0.125	\$13.23	\$13.23	\$11.17	\$11.17	\$11.17	\$15.47
	EM15110	0.110	0.625	0.375	0.125	\$13.23	\$13.23	\$11.17	\$11.17	\$11.17	\$15.47
R3	EM15120	0.120	0.625	0.375	0.125	\$13.23	\$13.23	\$11.17	\$11.17	\$11.17	\$15.47
	EM15125	0.125	0.625	0.375	0.125	\$13.23	\$13.23	\$11.17	\$11.17	\$11.17	\$15.47
	EM15130	0.130	0.625	0.375	0.125	\$13.83	\$13.83	\$11.77	\$11.77	\$11.77	\$16.23
	EM15140	0.140	0.625	0.375	0.125	\$13.83	\$13.83	\$11.77	\$11.77	\$11.77	\$16.23
	EM15150	0.150	0.625	0.375	0.125	\$13.83	\$13.83	\$11.77	\$11.77	\$11.77	\$16.23
	EM15156	0.156	0.625	0.375	0.125	\$13.83	\$13.83	\$11.77	\$11.77	\$11.77	\$16.23
R4	EM15160	0.160	0.625	0.375	0.125	\$13.83	\$13.83	\$11.77	\$11.77	\$11.77	\$16.23
	EM15170	0.170	0.625	0.375	0.125	\$14.71	\$14.71	\$12.65	\$12.65	\$12.65	\$17.32
	EM15187	0.187	0.625	0.375	0.125	\$14.71	\$14.71	\$12.65	\$12.65	\$12.65	\$17.32
	EM15190	0.190	0.625	0.375	0.125	\$14.71	\$14.71	\$12.65	\$12.65	\$12.65	\$17.32
	EM15200	0.200	0.625	0.375	0.125	\$15.32	\$15.32	\$13.26	\$13.26	\$13.26	\$18.08
	EM15210	0.210	0.625	0.375	0.125	\$15.32	\$15.32	\$13.26	\$13.26	\$13.26	\$18.08
R5	EM15220	0.220	0.625	0.375	0.125	\$15.32	\$15.32	\$13.26	\$13.26	\$13.26	\$18.08
R6	EM15250	0.250	0.625	0.375	0.125	\$15.32	\$15.32	\$13.26	\$13.26	\$13.26	\$18.08
R5	EM15312-SE	0.312	0.625	0.375	0.125	\$13.83	\$13.83	\$11.77	\$11.77	\$11.77	\$16.23
R6	EM15375-SE	0.375	0.625	0.375	0.125	\$13.83	\$13.83	\$11.77	\$11.77	\$11.77	\$16.23



*SE=SINGLE END INSERT

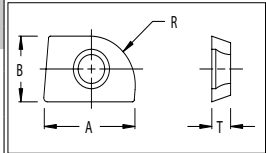
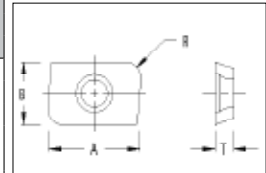
MADE IN **USA**

Please Specify Hone: **E = Honed Edge**
F = Sharp Edge

CARBIDE INSERTS FOR CONVEX RADIUS SUPERBEE®

EM19 SERIES R1-R8 CONVEX RADII **NEW!**

RANGE	INSERTS	RADIUS	A	B	T	T520	T530	NT56	NT33	NT13	NC57	
						HONE=E LIST	HONE=E LIST	HONE=E LIST	HONE= E or F LIST	HONE=E LIST	HONE=E LIST	
R1	EM19007	0.007	0.750	0.500	0.156	\$14.05	\$14.05	\$11.99	\$11.99	\$11.99	\$16.50	
	EM19015	0.015	0.750	0.500	0.156	\$10.48	\$10.48	\$8.86	\$8.86	\$8.86	\$11.97	
	EM19020	0.020	0.750	0.500	0.156	\$10.48	\$10.48	\$8.86	\$8.86	\$8.86	\$11.97	
	EM19030	0.030	0.750	0.500	0.156	\$10.48	\$10.48	\$8.86	\$8.86	\$8.86	\$11.97	
	EM19040	0.040	0.750	0.500	0.156	\$14.05	\$14.05	\$11.99	\$11.99	\$11.99	\$16.50	
	EM19050	0.050	0.750	0.500	0.156	\$14.05	\$14.05	\$11.99	\$11.99	\$11.99	\$16.50	
R2	EM19060	0.060	0.750	0.500	0.156	\$14.05	\$14.05	\$11.99	\$11.99	\$11.99	\$16.50	
	EM19070	0.070	0.750	0.500	0.156	\$14.05	\$14.05	\$11.99	\$11.99	\$11.99	\$16.50	
	EM19080	0.080	0.750	0.500	0.156	\$14.05	\$14.05	\$11.99	\$11.99	\$11.99	\$16.50	
	EM19090	0.090	0.750	0.500	0.156	\$14.05	\$14.05	\$11.99	\$11.99	\$11.99	\$16.50	
	EM19100	0.100	0.750	0.500	0.156	\$14.99	\$14.99	\$12.93	\$12.93	\$12.93	\$17.67	
	EM19110	0.110	0.750	0.500	0.156	\$14.99	\$14.99	\$12.93	\$12.93	\$12.93	\$17.67	
R3	EM19120	0.120	0.750	0.500	0.156	\$14.99	\$14.99	\$12.93	\$12.93	\$12.93	\$17.67	
	EM19125	0.125	0.750	0.500	0.156	\$14.99	\$14.99	\$12.93	\$12.93	\$12.93	\$17.67	
	EM19130	0.130	0.750	0.500	0.156	\$15.52	\$15.52	\$13.48	\$13.48	\$13.48	\$18.43	
	EM19140	0.140	0.750	0.500	0.156	\$15.52	\$15.52	\$13.48	\$13.48	\$13.48	\$18.43	
	EM19150	0.150	0.750	0.500	0.156	\$15.52	\$15.52	\$13.48	\$13.48	\$13.48	\$18.43	
	EM19156	0.156	0.750	0.500	0.156	\$15.52	\$15.52	\$13.48	\$13.48	\$13.48	\$18.43	
R4	EM19160	0.160	0.750	0.500	0.156	\$15.52	\$15.52	\$13.48	\$13.48	\$13.48	\$18.43	
	EM19170	0.170	0.750	0.500	0.156	\$16.47	\$16.47	\$14.41	\$14.41	\$14.41	\$21.70	
	EM19187	0.187	0.750	0.500	0.156	\$16.47	\$16.47	\$14.41	\$14.41	\$14.41	\$21.70	
	EM19190	0.190	0.750	0.500	0.156	\$16.47	\$16.47	\$14.41	\$14.41	\$14.41	\$21.70	
	EM19200	0.200	0.750	0.500	0.156	\$17.08	\$17.08	\$15.02	\$15.02	\$15.02	\$20.28	
	EM19210	0.210	0.750	0.500	0.156	\$17.08	\$17.08	\$15.02	\$15.02	\$15.02	\$20.28	
R5	EM19220	0.220	0.750	0.500	0.156	\$17.08	\$17.08	\$15.02	\$15.02	\$15.02	\$20.28	
	EM19250	0.250	0.750	0.500	0.156	\$17.08	\$17.08	\$15.02	\$15.02	\$15.02	\$20.28	
	R6	EM19312	0.312	0.750	0.500	0.156	\$18.29	\$18.29	\$16.23	\$16.23	\$16.23	\$21.79
	R7	EM19375	0.375	0.750	0.500	0.156	\$18.29	\$18.29	\$16.23	\$16.23	\$16.23	\$21.79
	R8	EM19437-SE	0.437	0.750	0.500	0.156	\$19.50	\$19.50	\$17.43	\$17.43	\$17.43	\$23.24
	R8	EM19500-SE	0.500	0.750	0.500	0.156	\$19.50	\$19.50	\$17.43	\$17.43	\$17.43	\$23.24



*SE=SINGLE END INSERT

SUPERBEE® MADE IN AMERICA

SUPERBEE® INDEXABLE TOOL
HOLDERS AND INSERTS

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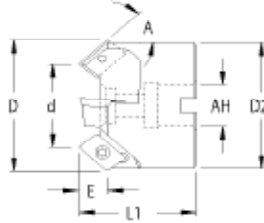
SERIES CM

CHAMFER & ANGLE CUTTERS - SHELL MILL


**Left hand, metric
 sizes, and
 specials**



MADE IN USA



SHELL MILL SERIES CM

PART NUMBER	D	d	D2	AH	L1	ANGLE	FLUTES	E	INSERT	LIST
CM963154845	2.352	1.500	2.268	0.750	1.825	45°	3	0.400	EM15	\$293.70
CM963194845	2.530	1.500	2.395	0.750	1.825	45°	3	0.490	EM19	\$293.70

USE ANY **SUPERBEE®** INSERT! CONVEX RADIUS • CONCAVE RADIUS • ANGLE • SPECIAL FORM • JUST CALL!

SPARE PARTS:

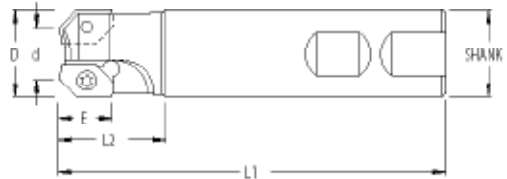
ALL EM15 INSERTS
 SCREW: **BS15**
 WRENCH: **BW15**

ALL EM19 INSERTS
 SCREW: **BS19**

SERIES A CHAMFER & ANGLE CUTTERS - A10 TO A60 WELDON SHANK



MADE IN USA



WELDON SHANK

SERIES A The formula for calculating the 'd' dimension is on the next page.

PART NUMBER	D	d	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BE4011540A#	0.625	PAGE 49	0.625	3.375	1.000	1	0.625	EM15	\$106.15
BE4411548A#	0.687	PAGE 49	0.750	4.000	1.250	1	0.625	EM15	\$133.65
BE4811548A#	0.750	PAGE 49	0.750	4.000	1.250	1	0.625	EM15	\$121.55
BE5611948A#	0.875	PAGE 49	0.750	4.500	1.250	1	0.750	EM19	\$141.90
BE5611964A#	0.875	PAGE 49	1.000	4.500	1.250	1	0.750	EM19	\$133.65
BE6411948A#	1.000	PAGE 49	0.750	4.500	1.250	1	0.750	EM19	\$141.90
BE6411964A#	1.000	PAGE 49	1.000	4.500	1.250	1	0.750	EM19	\$127.60
BE6421548A#	1.000	PAGE 49	7.500	4.500	1.250	2	0.625	EM15	\$176.00
BE6421564A#	1.000	PAGE 49	1.000	4.500	1.250	2	0.625	EM15	\$157.30
BE8021980A#	1.250	PAGE 49	1.250	5.000	1.750	2	0.750	EM19	\$187.00
BE8031580A#	1.250	PAGE 49	1.250	5.000	1.750	3	0.625	EM15	\$229.90
BE9621980A#	1.500	PAGE 49	1.250	5.000	1.750	2	0.750	EM19	\$204.60
BE9631580A#	1.500	PAGE 49	1.250	5.000	1.750	3	0.625	EM15	\$233.20

Please specify the chamfer angle you need at the end of the order number. See order example.

Order Example:
 Need a 7/8 inch tool to cut a 20° chamfer/angle? Your order number would be BE5611948 **A20**.

ALL OF THESE **SUPERBEE®** CUTTERS ACCOMMODATE ONLY ONE SIZE CHAMFER & ANGLE

SERIES A CHAMFER & ANGLE CUTTERS - A10 TO A60 R8 SHANK



MADE IN USA



The formula for calculating the 'd' dimension is on the next page.

PART NUMBER	D	d	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BE64215R8A#	1.000	PAGE 49	R8	5.880	1.500	2	0.625	EM15	\$199.10
BE80219R8A#	1.250	PAGE 49	R8	6.130	1.750	2	0.750	EM19	\$211.20
BE96315R8A#	1.500	PAGE 49	R8	6.130	1.750	3	0.625	EM15	\$257.40

R8 SHANK SERIES A

ALL OF THESE **SUPERBEE®** CUTTERS ACCOMMODATE ONLY ONE SIZE CHAMFER & ANGLE

= SELECT ANGLE
 E = APPROXIMATE LENGTH

SUPERBEE® MADE IN AMERICA

SUPERBEE® INDEXABLE TOOL
 HOLDERS AND INSERTS

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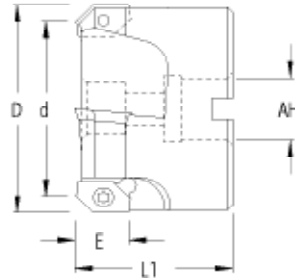


SERIES A

CHAMFER & ANGLE CUTTERS - A10 TO A60 SHELL MILLS



MADE IN USA



SHELL MILLS SERIES A

The formula for calculating the 'd' dimension is posted below.

PART NUMBER	D	d	AH	L1	FLUTES	E	INSERT	WRENCH	SCREW	LIST
BE12831948A#	2.000	BELOW	0.750	1.825	3	0.750	EM19	BW19	BS19	\$235.40
BE12851548A#	2.000	BELOW	0.750	1.825	5	0.625	EM15	BW15	BS15	\$313.50
BE14451548A#	2.250	BELOW	0.750	1.825	5	0.625	EM15	BW15	BS15	\$325.60
BE16031948A#	2.500	BELOW	0.750	1.825	3	0.750	EM19	BW19	BS19	\$283.80
BE16051548A#	2.500	BELOW	0.750	1.825	5	0.625	EM15	BW15	BS15	\$337.70
BE19261564A#	3.000	BELOW	1.000	1.825	6	0.625	EM15	BW15	BS15	\$355.30
BE22461580A#	3.500	BELOW	1.250	1.825	6	0.625	EM15	BW15	BS15	\$377.30

INSERTS FOR THESE CUTTERS ARE BELOW

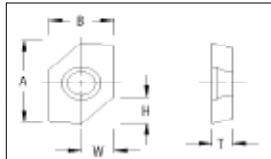
THE FORMULA FOR CALCULATING THE 'd' CUTTER DIMENSION IS:

$D \varnothing - (2 \times W) = d$, WHERE D = CUTTER DIAMETER AND W IS THE DIMENSION ON THE ANGLE INSERT YOU WISH TO USE (SEE "W" IN THE CHART BELOW). FOR EXAMPLE:

THE CUTTER DIAMETER IS 1", IT IS A 2 FLUTE CUTTER, AND THE ANGLE IS 25° ON AN EM1525250 INSERT. YOU WOULD TAKE 1.000" (DØ) - .234 (2 X W) = .766 (d).

ANOTHER EXAMPLE WOULD BE A CUTTER DIAMETER OF 1", IT IS 1 FLUTE, THE ANGLE IS 30°, AND THE INSERT IS AN EM1930250. YOU WOULD TAKE 1.000" (DØ) - .288 (2 X W) = .712 (d).

CARBIDE INSERTS FOR CHAMFER AND ANGLE SERIES A10-A60



MADE USA Please Specify

Hone:
E = Honed Edge
F = Sharp Edge

NEW!

INSERT	SIDE ANGLE	INCL. ANGLE	H	W	A	T520	T530	NT56	NT33	NT13	NC57
						HONE=E LIST	HONE=E LIST	HONE=E LIST	HONE=E or F LIST	HONE=E LIST	HONE=E LIST
EM1510250	10°	20°	0.250	0.044	0.625	\$17.37	\$17.37	\$15.50	\$15.50	\$15.50	\$16.60
EM1515250	15°	30°	0.250	0.067	0.625	\$17.37	\$17.37	\$15.50	\$15.50	\$15.50	\$16.60
EM1520250	20°	40°	0.250	0.091	0.625	\$17.37	\$17.37	\$15.50	\$15.50	\$15.50	\$16.60
EM1525250	25°	50°	0.250	0.117	0.625	\$17.37	\$17.37	\$15.50	\$15.50	\$15.50	\$16.60
EM1530200	30°	60°	0.200	0.115	0.625	\$17.37	\$17.37	\$15.50	\$15.50	\$15.50	\$16.60
EM1541200	41°	82°	0.200	0.174	0.625	\$17.37	\$17.37	\$15.50	\$15.50	\$15.50	\$16.60
EM1545200	45°	90°	0.200	0.200	0.625	\$17.37	\$17.37	\$15.50	\$15.50	\$15.50	\$16.60
EM1550200	50°	100°	0.115	0.200	0.625	\$17.37	\$17.37	\$15.50	\$15.50	\$15.50	\$16.60
EM1560200	60°	120°	0.168	0.200	0.625	\$17.37	\$17.37	\$15.50	\$15.50	\$15.50	\$16.60
EM1910300	10°	20°	0.300	0.052	0.750	\$18.97	\$18.97	\$17.10	\$17.10	\$17.10	\$18.20
EM1915300	15°	30°	0.300	0.080	0.750	\$18.97	\$18.97	\$17.10	\$17.10	\$17.10	\$18.20
EM1920300	20°	40°	0.300	0.109	0.750	\$18.97	\$18.97	\$17.10	\$17.10	\$17.10	\$18.20
EM1925300	25°	50°	0.300	0.140	0.750	\$18.97	\$18.97	\$17.10	\$17.10	\$17.10	\$18.20
EM1930250	30°	60°	0.250	0.144	0.750	\$18.97	\$18.97	\$17.10	\$17.10	\$17.10	\$18.20
EM1941250	41°	82°	0.250	0.217	0.750	\$18.97	\$18.97	\$17.10	\$17.10	\$17.10	\$18.20
EM1945250	45°	90°	0.250	0.250	0.750	\$18.97	\$18.97	\$17.10	\$17.10	\$17.10	\$18.20
EM1950250	50°	100°	0.144	0.250	0.750	\$18.97	\$18.97	\$17.10	\$17.10	\$17.10	\$18.20
EM1960250	60°	120°	0.210	0.250	0.750	\$18.97	\$18.97	\$17.10	\$17.10	\$17.10	\$18.20

E = APPROXIMATE LENGTH

= SELECT ANGLE

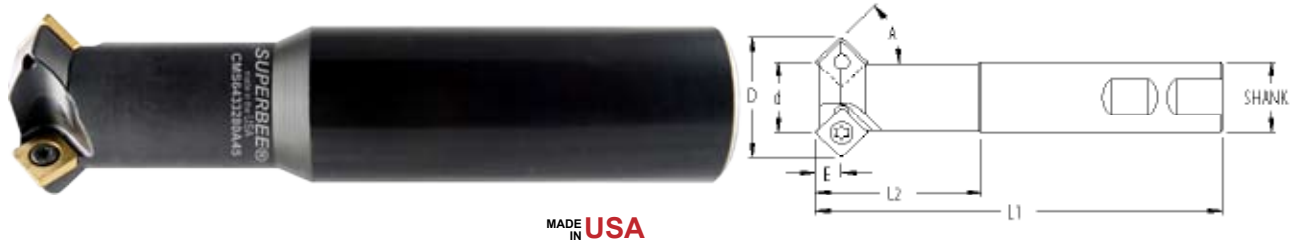
SUPERBEE® INDEXABLE TOOL
HOLDERS AND INSERTS

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SERIES CMS

CHAMFER & ANGLE CUTTERS - WELDON SHANK



MADE IN USA

ALL OF THESE **SUPERBEE®** CUTTERS ACCOMMODATE 45° ANGLE USING A SQUARE INSERT.

WELDON SHANK SERIES CMS

PART NUMBER	D	d	SHANK	L1	L2	ANGLE	FLUTES	E	INSERT	WRENCH	SCREW	LIST
CMS4014264A45	0.989	0.312	1.000	5.000	1.750	45°	1	0.343	SP42	NT15	CS6	\$107.80
CMS4814264A45	1.304	0.625	1.000	5.250	2.000	45°	1	0.343	SP42	NT15	CS6	\$132.00
CMS6424280A45	1.680	1.000	1.250	5.500	2.250	45°	2	0.343	SP42	NT15	CS6	\$167.77
CMS6433280A45	1.504	1.000	1.250	5.500	2.250	45°	3	0.255	SP32	NT9	CS5	\$161.70
CMS8034280A45	1.931	1.250	1.250	5.500	2.250	45°	3	0.343	SP42	NT15	CS6	\$174.90
CMS9634280A45	2.056	1.375	1.250	5.500	2.250	45°	3	0.343	SP42	NT15	CS6	\$210.10

INSERTS FOR THESE CUTTERS ARE BELOW

SUPERBEE® MADE IN AMERICA

SPARE PARTS:

ALL SP32 INSERTS
SCREW: **CS5**
WRENCH: **NT9**

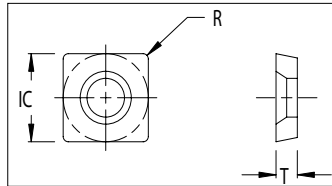
ALL EM19 INSERTS
SCREW: **CS6**
WRENCH: **NT15**

CARBIDE INSERTS FOR CHAMFER & ANGLE SERIES CMS

INSERT	R	IC	T	NEW!				
				T520	T530	NT56	NT33	NT13
				HONE=E	HONE=E	HONE=E	HONE=E or F	HONE=E
				LIST	LIST	LIST	LIST	LIST
SP32010	0.010	0.375	0.125	\$14.48	\$14.48	\$12.43	\$12.43	\$12.43
SP32015	0.015	0.375	0.125	\$12.06	\$12.06	\$10.01	\$10.01	\$10.01
SP32030	0.030	0.375	0.125	\$12.06	\$12.06	\$10.01	\$10.01	\$10.01
SP32060	0.060	0.375	0.125	\$14.48	\$14.48	\$12.43	\$12.43	\$12.43
SP32090	0.090	0.375	0.125	\$16.29	\$16.29	\$14.25	\$14.25	\$14.25
SP42010	0.010	0.500	0.125	\$14.72	\$14.72	\$12.54	\$12.54	\$12.54
SP42015	0.015	0.500	0.125	\$13.29	\$13.29	\$11.11	\$11.11	\$11.11
SP42030	0.030	0.500	0.125	\$13.29	\$13.29	\$11.11	\$11.11	\$11.11
SP42060	0.060	0.500	0.125	\$14.72	\$14.72	\$12.54	\$12.54	\$12.54
SP42090	0.090	0.500	0.125	\$16.53	\$16.53	\$14.36	\$14.36	\$14.36



Please Specify Hone:
E = Honed Edge
F = Sharp Edge



E = APPROXIMATE LENGTH

**SUPERBEE® INDEXABLE TOOL
HOLDERS AND INSERTS**

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SERIES C1 TO C6

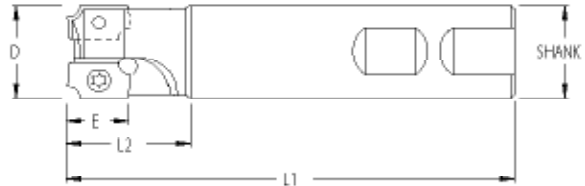
CONCAVE RADIUS .010 - .250 WELDON SHANK

CORNER ROUNDING CARBIDE

SUPERBEE® MADE IN AMERICA

= RADIUS RANGE

- | | |
|--|--|
| <p>C 1 ACCOMMODATES RADII FROM .010" TO .060"</p> <p>C 2 ACCOMMODATES RADII FROM .070" TO .125"</p> <p>C 3 ACCOMMODATES RADII FROM .130" TO .160"</p> | <p>C 4 ACCOMMODATES RADII FROM .170" TO .190"</p> <p>C 5 ACCOMMODATES RADII FROM .197" TO .220"</p> <p>C 6 ACCOMMODATES RADII FROM .236" TO .250"</p> |
|--|--|



WELDON SHANK SERIES C

MADE IN USA

PART NUMBER		D	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BE4011540C#	C1 - C2	0.625	0.625	3.375	1.000	1	0.625	EM15	\$106.15
BE4411548C#	C1 - C2	0.687	0.750	4.000	1.250	1	0.625	EM15	\$133.65
BE4811548C#	C1 - C2	0.750	0.750	4.000	1.250	1	0.625	EM15	\$121.55
BE5611948C#	C1 - C4	0.875	0.750	4.500	1.250	1	0.750	EM19	\$141.90
BE5611964C#	C1 - C4	0.875	1.000	4.500	1.250	1	0.750	EM19	\$133.65
BE6411948C#	C1 - C6	1.000	0.750	4.500	1.250	1	0.750	EM19	\$141.90
BE6411964C#	C1 - C6	1.000	1.000	4.500	1.250	1	0.750	EM19	\$127.60
BE6421548C#	C1 - C2	1.000	7.500	4.500	1.250	2	0.625	EM15	\$176.00
BE6421564C#	C1 - C2	1.000	1.000	4.500	1.250	2	0.625	EM15	\$157.30
BE8021980C#	C1 - C6	1.250	1.250	5.000	1.750	2	0.750	EM19	\$187.00
BE8031580C#	C1 - C2	1.250	1.250	5.000	1.750	3	0.625	EM15	\$229.90
BE9621980C#	C1 - C6	1.500	1.250	5.000	1.750	2	0.750	EM19	\$204.60
BE9631580C#	C1 - C2	1.500	1.250	5.000	1.750	3	0.625	EM15	\$233.20

INSERTS FOR THESE CUTTERS ARE ON NEXT PAGE

SPARE PARTS:

ALL EM15 INSERTS
 SCREW: **BS15**
 WRENCH: **BW15**

ALL EM19 INSERTS
 SCREW: **BS19**
 WRENCH: **BW19**



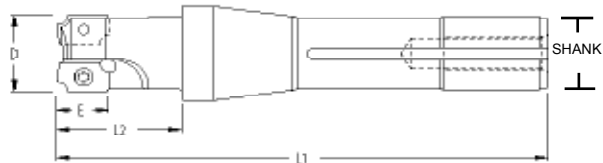
Left hand, metric sizes, and specials available on request.

Please specify the size concave radius you need at the end of the order number. (Replace the # with a radius value.) See example.

Order Example:
 Need a 3/4 inch tool to cut a .090 concave radius? Your order number would be BE4811548**C2**.

Inserts for concave Radii .170 and above are single ended

SERIES C1 TO C6 CONCAVE RADIUS .010 - .250 R8 SHANK



MADE IN USA

SEE ABOVE FOR CORRECT RADIUS DESIGNATION

PART NUMBER	D	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BE64215R8C#	1.000	R8	5.880	1.500	2	0.625	EM15	\$199.10
BE80219R8C#	1.250	R8	6.130	1.750	2	0.750	EM19	\$211.20
BE96315R8C#	1.500	R8	6.130	1.750	3	0.625	EM15	\$257.40

INSERTS FOR THESE CUTTERS ARE ON NEXT PAGE

R8 SHANK SERIES C

Inserts for concave Radii .170 and above are single ended only.

SUPERBEE® AND NEW LUBE® PRODUCTS MADE IN AMERICA

= RADIUS RANGE
 E = APPROXIMATE LENGTH

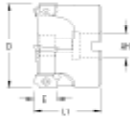
SUPERBEE® INDEXABLE TOOL HOLDERS AND INSERTS

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SERIES C1 TO C6

CONCAVE RADIUS .010 - .250 SHELL MILLS



MADE IN USA



Left hand, metric sizes, and specials available on request.

Please specify the size concave radius you need at the end of the order number. See example below:

Order Example:
Need a 3/4 inch tool to cut a .090 concave radius? Your order number would be **BE4811548C2**.

SHELL MILL SERIES C SEE PREVIOUS PAGE FOR CORRECT RADIUS DESIGNATION

PART NUMBER	INSERT	D	AH	L1	FLUTES	E	LIST
BE12831948	C1 - C6	EM19	2.000	0.750	1.825	3	0.650 \$235.40
BE12851548	C1 - C2	EM15	2.000	0.750	1.825	5	0.550 \$313.50
BE14451548	C1 - C2	EM15	2.250	0.750	1.825	5	0.550 \$325.60
BE16031948	C1 - C6	EM19	2.500	0.750	1.825	3	0.650 \$283.80
BE16051548	C1 - C2	EM15	2.500	0.750	1.825	5	0.550 \$337.70
BE19261564	C1 - C2	EM15	3.000	1.000	1.825	6	0.550 \$355.30
BE22461580	C1 - C2	EM15	3.500	1.250	1.825	6	0.550 \$377.30

INSERTS FOR THESE CUTTERS ARE BELOW

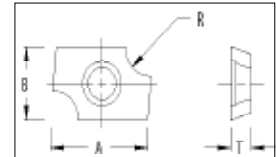
CARBIDE INSERTS FOR CONCAVE RADIUS SERIES C1 TO C6

RANGE	INSERT	DEC/MET	A	B	T	T520	T530	NT56	NT33	NT13													
						HONE=E LIST	HONE=E LIST	HONE=E LIST	HONE=E or F LIST	HONE=E LIST													
C1	EM15	EM15C010	0.010	0.625	0.375	0.125	\$21.99	\$21.99	\$19.92	\$19.92	\$19.92												
							EM15C015	0.015	0.625	0.375	0.125	\$21.99	\$21.99	\$19.92	\$19.92	\$19.92							
							EM15C020	0.020	0.625	0.375	0.125	\$21.99	\$21.99	\$19.92	\$19.92	\$19.92							
							EM15C030	0.030	0.625	0.375	0.125	\$21.99	\$21.99	\$19.92	\$19.92	\$19.92							
							EM15C0393	1MM/.0393	0.625	0.375	0.125	\$21.99	\$21.99	\$19.92	\$19.92	\$19.92							
							EM15C040	0.040	0.625	0.375	0.125	\$21.99	\$21.99	\$19.92	\$19.92	\$19.92							
							EM15C050	0.050	0.625	0.375	0.125	\$21.99	\$21.99	\$19.92	\$19.92	\$19.92							
							EM15C060	0.060	0.625	0.375	0.125	\$21.99	\$21.99	\$19.92	\$19.92	\$19.92							
							EM15C070	0.070	0.625	0.375	0.125	\$23.09	\$23.09	\$19.92	\$19.92	\$19.92							
							EM15C0787	2MM/.0787	0.625	0.375	0.125	\$23.09	\$23.09	\$19.92	\$19.92	\$19.92							
C2	EM15	EM15C080	0.080	0.625	0.375	0.125	\$23.09	\$23.09	\$19.92	\$19.92	\$19.92												
							EM15C090	0.090	0.625	0.375	0.125	\$23.09	\$23.09	\$19.92	\$19.92	\$19.92							
							EM15C100	0.100	0.625	0.375	0.125	\$26.14	\$26.14	\$24.07	\$24.07	\$24.07							
							EM15C110	0.110	0.625	0.375	0.125	\$26.14	\$26.14	\$24.07	\$24.07	\$24.07							
							EM15C118	3MM/.118	0.625	0.375	0.125	\$26.14	\$26.14	\$24.07	\$24.07	\$24.07							
							EM15C120	0.120	0.625	0.375	0.125	\$26.14	\$26.14	\$24.07	\$24.07	\$24.07							
							EM15C125	0.125	0.625	0.375	0.125	\$26.14	\$26.14	\$24.07	\$24.07	\$24.07							
							C1	EM19	EM19C010	0.010	0.750	0.500	0.156	\$23.99	\$23.99	\$21.93	\$21.93	\$21.93					
														EM19C020	0.020	0.750	0.500	0.156	\$23.99	\$23.99	\$21.93	\$21.93	\$21.93
														EM19C030	0.030	0.750	0.500	0.156	\$23.99	\$23.99	\$21.93	\$21.93	\$21.93
EM19C0393	1MM/.0393	0.750	0.500	0.156	\$23.99	\$23.99								\$21.93	\$21.93	\$21.93							
EM19C040	0.040	0.750	0.500	0.156	\$23.99	\$23.99								\$21.93	\$21.93	\$21.93							
EM19C050	0.050	0.750	0.500	0.156	\$23.99	\$23.99								\$21.93	\$21.93	\$21.93							
EM19C060	0.060	0.750	0.500	0.156	\$23.99	\$23.99								\$21.93	\$21.93	\$21.93							
EM19C070	0.070	0.750	0.500	0.156	\$25.09	\$25.09								\$23.03	\$23.03	\$23.03							
EM19C0787	2MM/.0787	0.750	0.500	0.156	\$25.09	\$25.09								\$23.03	\$23.03	\$23.03							
EM19C080	0.080	0.750	0.500	0.156	\$25.09	\$25.09								\$23.03	\$23.03	\$23.03							
C2	EM19	EM19C090	0.090	0.750	0.500	0.156	\$25.09	\$25.09	\$23.03	\$23.03	\$23.03												
							EM19C100	0.100	0.750	0.500	0.156	\$28.15	\$28.15	\$26.08	\$26.08	\$26.08							
							EM19C110	0.110	0.750	0.500	0.156	\$28.15	\$28.15	\$26.08	\$26.08	\$26.08							
							EM19C118	3MM/.118	0.750	0.500	0.156	\$28.15	\$28.15	\$26.08	\$26.08	\$26.08							
							EM19C120	0.120	0.750	0.500	0.156	\$28.15	\$28.15	\$26.08	\$26.08	\$26.08							
							EM19C125	0.125	0.750	0.500	0.156	\$28.15	\$28.15	\$26.08	\$26.08	\$26.08							
							EM19C130	0.130	0.750	0.500	0.156	\$28.37	\$28.37	\$26.30	\$26.30	\$26.30							
							EM19C140	0.140	0.750	0.500	0.156	\$28.37	\$28.37	\$26.30	\$26.30	\$26.30							
							EM19C150	0.150	0.750	0.500	0.156	\$28.72	\$28.72	\$26.86	\$26.86	\$26.86							
							EM19C156	0.156	0.750	0.500	0.156	\$29.96	\$29.96	\$27.00	\$27.00	\$27.00							
C3	EM19	EM19C157	4MM/.157	0.750	0.500	0.156	\$29.96	\$29.96	\$28.11	\$28.11	\$28.11												
							EM19C160	0.160	0.750	0.500	0.156	\$29.96	\$29.96	\$28.11	\$28.11	\$28.11							
							EM19C170	0.170	0.750	0.500	0.156	\$25.65	\$25.65	\$23.80	\$23.80	\$23.80							
							EM19C180	0.180	0.750	0.500	0.156	\$25.65	\$25.65	\$23.80	\$23.80	\$23.80							
							EM19C187	0.187	0.750	0.500	0.156	\$26.91	\$26.91	\$25.05	\$25.05	\$25.05							
							EM19C190	0.190	0.750	0.500	0.156	\$26.91	\$26.91	\$25.05	\$25.05	\$25.05							
							EM19C197	5MM/.197	0.750	0.500	0.156	\$26.91	\$26.91	\$25.05	\$25.05	\$25.05							
							EM19C200	0.200	0.750	0.500	0.156	\$28.01	\$28.01	\$26.15	\$26.15	\$26.15							
							EM19C210	0.210	0.750	0.500	0.156	\$29.22	\$29.22	\$27.16	\$27.16	\$27.16							
							EM19C220	0.220	0.750	0.500	0.156	\$29.22	\$29.22	\$27.16	\$27.16	\$27.16							
C6	EM19	EM19C236	6MM/.236	0.750	0.500	0.156	\$30.25	\$30.25	\$28.19	\$28.19	\$28.19												
		EM19C250	0.250	0.750	0.500	0.156	\$31.77	\$31.77	\$29.71	\$29.71	\$29.71												

SINGLE ENDED

E=APPROXIMATE LENGTH *SE=SINGLE END INSERT

MADE IN USA



Match the insert to the radius you are cutting:

Order example:
If you purchase SUPERBEE® cutter #BE6411964C6 you will want to purchase insert #EM19C250 (specify grade).



Specify Hone:
E = Honed Edge
F = Sharp Edge

SUPERBEE® INDEXABLE TOOL HOLDERS AND INSERTS

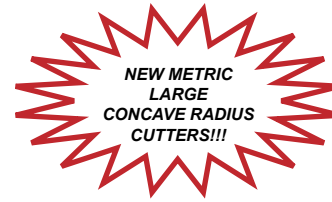
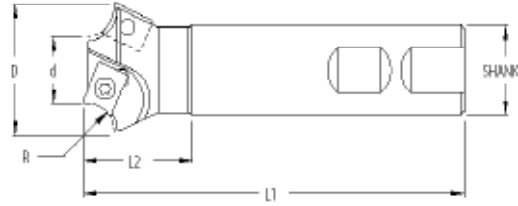
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SERIES C251 THROUGH C1000

LARGE CONCAVE RADIUS .250 - 1.000

MADE IN **USA**



USA PATENT NUMBER 6,053,673

Patented geometry breaks 90 degree arc into smaller segments for smoother, faster cutting.

WELDON SHANK SERIES BC-LARGE

PART NUMBER	R	D	d	SHANK	L1	L2	FLUTES	INSERT RANGE	LIST
BC4821564C250	.250-.280	1.250	0.750	1.000	4.500	1.250	2	EC15C250-EC15C280	\$172.70
BC4821564C281	.281-.311	1.312	0.750	1.000	4.500	1.250	2	EC15C281-EC15C311	\$173.80
BC4821564C312	.312-.342	1.375	0.750	1.000	4.500	1.250	2	EC15C312-EC15C342	\$174.90
BC4821564C343	.343-.374	1.437	0.750	1.000	4.500	1.250	2	EC15C343-EC15C374	\$183.70
BC4821564C375	.375-.405	1.500	0.750	1.000	4.500	1.250	2	EC15C375-EC15C405	\$185.90
BC5621980C406	.406-.436	1.687	0.875	1.250	5.000	1.750	2	EC19C406-EC19C436	\$204.60
BC5621980C437	.437-.467	1.750	0.875	1.250	5.000	1.750	2	EC19C437-EC19C467	\$205.70
BC5621980C468	.468-.499	1.812	0.875	1.250	5.000	1.750	2	EC19C468-EC19C499	\$206.80
BC5621980C500	.500-.530	1.875	0.875	1.250	5.000	1.750	2	EC19C500-EC19C530	\$207.90
BC8031580C531	.531-.561	2.312	1.250	1.250	5.000	1.750	3	EC15C531-EC15C561	\$212.30
BC8031580C562	.562-.592	2.375	1.250	1.250	5.000	1.750	3	EC15C562-EC15C592	\$213.40
BC8031580C625	.625-.655	2.500	1.250	1.250	5.000	1.750	3	EC15C625-EC15C655	\$214.50
BC9631980C656	.656-.686	2.812	1.500	1.250	5.000	1.750	3	EC19C656-EC19C686	\$215.60
BC9631980C687	.687-.717	2.875	1.500	1.250	5.000	1.750	3	EC19C687-EC19C717	\$216.70
BC9631980C718	.718-.749	2.937	1.500	1.250	5.000	1.750	3	EC19C718-EC19C749	\$217.80
BC9631980C750	.750-.780	3.000	1.500	1.250	5.000	1.750	3	EC19C750-EC19C780	\$218.90
BC9631980C781	.781-.811	3.062	1.500	1.250	5.000	1.750	3	EC19C781-EC19C811	\$231.00
BC9631980C812	.812-.842	3.125	1.500	1.250	5.000	1.750	3	EC19C812-EC19C842	\$231.00
BC11241980C843	.843-.874	3.437	1.750	1.250	5.250	2.000	4	EC19C843-EC19C874	\$258.50
BC11241980C875	.875-.905	3.500	1.750	1.250	5.250	2.000	4	EC19C875-EC19C905	\$258.50
BC11241980C906	.906-.936	3.562	1.750	1.250	5.250	2.000	4	EC19C906-EC19C936	\$258.50
BC11241980C937	.937-.967	3.625	1.750	1.250	5.250	2.000	4	EC19C937-EC19C967	\$258.50
BC11241980C968	.968-.999	3.687	1.750	1.250	5.250	2.000	4	EC19C968-EC19C999	\$258.50
BC11241980C1000	1.000-1.031	3.750	1.750	1.250	5.250	2.000	4	EC19C1000-EC19C1031	\$258.50

INSERTS FOR THESE CUTTERS ARE ON NEXT PAGE

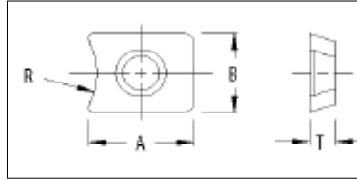
SUPERBEE® INDEXABLE TOOL
HOLDERS AND INSERTS
80



BIG CONCAVE CORNER ROUNDING INSERTS

SERIES C250 thru C1000 Metric Included

NEW!
METRIC SIZES
AVAILABLE!



MADE IN **USA**

Lower Prices due to increase in manufacturing efficiency!

INSERT	R		A	B	T520	T530	NT56	NT33	NT13
	RADIUS	EQUIV.			HONE=E	HONE=E	HONE=E	HONE=E or F	HONE=E
					LIST	LIST	LIST	LIST	LIST
EC15C250	1/4	0.250	0.500	0.375	\$27.64	\$27.64	\$25.59	\$25.59	\$25.59
EC15C275	7MM	0.276	0.500	0.375	\$27.64	\$27.64	\$25.59	\$25.59	\$25.59
EC15C281	9/32	0.281	0.500	0.375	\$27.64	\$27.64	\$25.59	\$25.59	\$25.59
EC15C312	5/16	0.313	0.500	0.375	\$27.64	\$27.64	\$25.59	\$25.59	\$25.59
EC15C315	8MM	0.315	0.500	0.375	\$27.64	\$27.64	\$25.59	\$25.59	\$25.59
EC15C343	11/32	0.344	0.500	0.375	\$28.48	\$28.48	\$26.42	\$26.42	\$26.42
EC15C354	9MM	0.354	0.500	0.375	\$28.48	\$28.48	\$26.42	\$26.42	\$26.42
EC15C375	3/8	0.375	0.500	0.375	\$29.29	\$29.29	\$27.24	\$27.24	\$27.24
EC15C393	10MM	0.394	0.500	0.375	\$29.29	\$29.29	\$27.24	\$27.24	\$27.24
EC19C406	13/32	0.406	0.625	0.500	\$29.84	\$29.84	\$27.79	\$27.79	\$27.79
EC19C433	11MM	0.433	0.625	0.500	\$29.84	\$29.84	\$27.79	\$27.79	\$27.79
EC19C437	7/16	0.438	0.625	0.500	\$29.84	\$29.84	\$27.79	\$27.79	\$27.79
EC19C468	15/32	0.469	0.625	0.500	\$30.78	\$30.78	\$27.79	\$27.79	\$27.79
EC19C472	12MM	0.472	0.625	0.500	\$30.78	\$30.78	\$28.72	\$28.72	\$28.72
EC19C500	1/2	0.500	0.625	0.500	\$30.78	\$30.78	\$28.72	\$28.72	\$28.72
EC19C512	13MM	0.512	0.625	0.500	\$30.78	\$30.78	\$28.72	\$28.72	\$28.72
EC15C531	17/32	0.531	0.500	0.375	\$31.26	\$31.26	\$29.21	\$29.21	\$29.21
EC15C551	14MM	0.551	0.500	0.375	\$31.26	\$31.26	\$29.21	\$29.21	\$29.21
EC15C562	9/16	0.525	0.500	0.375	\$31.26	\$31.26	\$29.21	\$29.21	\$29.21
EC15C590	15MM	0.591	0.500	0.375	\$31.26	\$31.26	\$29.21	\$29.21	\$29.21
EC15C625	5/8	0.625	0.500	0.375	\$31.26	\$31.26	\$29.21	\$29.21	\$29.21
EC15C629	16MM	0.630	0.500	0.375	\$31.26	\$31.26	\$29.21	\$29.21	\$29.21
EC19C656	21/32	0.656	0.625	0.500	\$31.70	\$31.70	\$29.65	\$29.65	\$29.65
EC19C669	17MM	0.669	0.625	0.500	\$31.70	\$31.70	\$29.65	\$29.65	\$29.65
EC19C687	11/16	0.688	0.625	0.500	\$32.37	\$32.37	\$29.65	\$29.65	\$29.65
EC19C708	18MM	0.709	0.625	0.500	\$32.37	\$32.37	\$29.65	\$29.65	\$29.65
EC19C718	23/32	0.719	0.625	0.500	\$32.37	\$32.37	\$29.65	\$29.65	\$29.65
EC19C748	19MM	0.748	0.625	0.500	\$32.37	\$32.37	\$29.65	\$29.65	\$29.65
EC19C750	3/4	0.750	0.625	0.500	\$32.81	\$32.81	\$30.76	\$30.76	\$30.76
EC19C781	25/32	0.781	0.625	0.500	\$32.81	\$32.81	\$30.76	\$30.76	\$30.76
EC19C787	20MM	0.787	0.625	0.500	\$32.81	\$32.81	\$30.76	\$30.76	\$30.76
EC19C812	13/16	0.813	0.625	0.500	\$32.81	\$32.81	\$30.76	\$30.76	\$30.76
EC19C826	21MM	0.826	0.625	0.500	\$32.84	\$32.84	\$30.76	\$30.76	\$30.76
EC19C843	27/64	0.843	0.625	0.500	\$32.84	\$32.84	\$30.76	\$30.76	\$30.76
EC19C866	22MM	0.866	0.625	0.500	\$32.84	\$32.84	\$30.76	\$30.76	\$30.76
EC19C875	7/8	0.875	0.625	0.500	\$32.84	\$32.84	\$30.76	\$30.76	\$30.76
EC19C906	23MM	0.906	0.625	0.500	\$32.84	\$32.84	\$30.76	\$30.76	\$30.76
EC19C937	15/16	0.937	0.625	0.500	\$32.84	\$32.84	\$30.76	\$30.76	\$30.76
EC19C944	24MM	0.944	0.625	0.500	\$32.84	\$32.84	\$30.76	\$30.76	\$30.76
EC19C984	25MM	0.948	0.625	0.500	\$32.84	\$32.84	\$30.76	\$30.76	\$30.76
EC19C1000	1	1.000	0.625	0.500	\$32.84	\$32.84	\$30.76	\$30.76	\$30.76



Match the insert to the radius you are cutting:

Order example:
If you purchase **SUPERBEE®** cutter #BC5621980C500 you will want to purchase insert #EC19C500 (specify grade).

SEE APPLICATION CHART ON PAGE 81 FOR INFORMATION ON SELECTING THE PROPER GRADE. OR CALL 800-227-9876 FOR TECHNICAL ASSISTANCE.

ALL INSERTS LISTED HERE ARE SINGLE END.

MADE IN **USA**

SUPERBEE® INDEXABLE TOOL HOLDERS AND INSERTS

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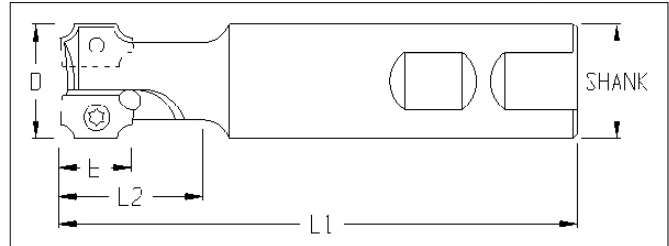
CONCAVE RADIUS TOP & BOTTOM CUTTERS

SERIES C1 - C6 Metric Included

NEW!

SERIES "T&B" CORNER ROUNDING CARBIDE

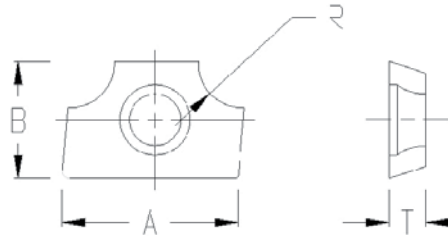
The fastest way
to Machine a
180° radius



WELDON SHANK T&B SERIES CONCAVE CUTTERS

Top & Bottom Cutter Bodies		D	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BE6421548T&BC#	C1 - C2	1.000	0.750	4.500	1.250	2	0.625	EM15	\$318.00
BE6421564T&BC#	C1 - C2	1.000	1.000	4.500	1.250	2	0.625	EM15	\$298.00
BE8021980T&BC#	C1 - C6	1.250	1.250	5.000	1.750	2	0.750	EM19	\$327.00
BE8031580T&BC#	C1 - C2	1.250	1.250	5.000	1.750	3	0.625	EM15	\$357.00

INSERTS FOR THESE CUTTERS ARE SHOWN BELOW



T&B SERIES CONCAVE INSERTS

Top & Bottom Inserts		DEC/MET	A	B	T	T520, HONE=E	T530, HONE=E	NT56, HONE=E	NT33, HONE=E or F	NT13, HONE=E
RANGE	PART NUMBER					LIST	LIST	LIST	LIST	LIST
C1	EM15C030T&B	0.030	0.625	0.375	0.125	\$29.99	\$29.99	\$27.19	\$27.19	\$27.19
EM15	EM15C0393T&B	1MM/.0393	0.625	0.375	0.125	\$29.99	\$29.99	\$27.19	\$27.19	\$27.19
	EM15C060T&B	0.060	0.625	0.375	0.125	\$29.99	\$29.99	\$27.19	\$27.19	\$27.19
	EM15C0787T&B	2MM/.0787	0.625	0.375	0.125	\$32.70	\$32.70	\$29.90	\$29.90	\$29.90
	EM15C090T&B	0.090	0.625	0.375	0.125	\$32.70	\$32.70	\$29.90	\$29.90	\$29.90
C2	EM15C118T&B	3MM/.118	0.625	0.375	0.125	\$35.60	\$35.60	\$32.80	\$32.80	\$32.80
EM15	EM15C120T&B	0.120	0.625	0.375	0.125	\$35.60	\$35.60	\$32.80	\$32.80	\$32.80
	EM15C125T&B	0.125	0.625	0.375	0.125	\$35.60	\$35.60	\$32.80	\$32.80	\$32.80
C3	EM19C156T&B	0.156	0.750	0.500	0.156	\$41.18	\$41.18	\$38.28	\$38.28	\$38.28
EM19	EM19C157T&B	4MM/.157	0.750	0.500	0.156	\$42.18	\$42.18	\$39.28	\$39.28	\$39.28
C4	EM19C187T&B	0.187	0.750	0.500	0.156	\$44.18	\$44.18	\$41.28	\$41.28	\$41.28
C5	EM19C197T&B	5MM/.197	0.750	0.500	0.156	\$45.18	\$45.18	\$42.28	\$42.28	\$42.28
C6	EM19C236T&B	6MM/.236	0.750	0.500	0.156	\$50.99	\$50.99	\$48.09	\$48.09	\$48.09
EM19	EM19C250T&B	0.250	0.750	0.500	0.156	\$53.99	\$53.99	\$51.09	\$51.09	\$51.09

SUPERBEE® INDEXABLE TOOL
HOLDERS AND INSERTS

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SERIES BB

BALL END CUTTERS



MADE IN **USA**

ALL OF THESE **SUPERBEE®** CUTTERS COME IN 5/8", 3/4", 7/8", AND 1" BALL ENDS.

**WELDON SHANK
SERIES BB**

SUPERBEE® MADE IN AMERICA

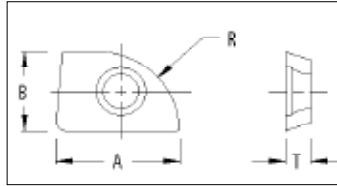
PART NUMBER	D	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BB4011440	0.625	0.625	3.375	1.000	1	0.625	EB14	\$108.90
BB4011440 2M	0.625	0.625	4.250	2.000	1	0.625	EB14	\$358.28
BB4011440 3S	0.625	0.625	4.750	3.000	1	0.625	EB14	\$414.85
BB4811548	0.750	0.750	4.000	1.250	1	0.625	EB15	\$124.30
BB4811548 225M	0.750	0.750	4.750	2.250	1	0.625	EB15	\$414.85
BB4811548 3M	0.750	0.750	5.500	3.000	1	0.625	EB15	\$414.85
BB4811548 35M	0.750	0.750	6.000	3.500	1	0.625	EB15	\$434.34
BB5611948	0.875	0.750	4.500	1.250	1	0.750	EB19	\$154.55
BB5611964	0.875	1.000	4.500	1.250	1	0.750	EB19	\$142.45
BB6411948	1.000	0.750	4.500	1.250	1	0.750	EB19	\$142.45
BB6411964	1.000	1.000	4.500	1.250	1	0.750	EB19	\$130.35
BB6411964 2M	1.000	1.000	4.500	2.000	1	0.750	EB19	\$458.85
BB6411964 3M	1.000	1.000	5.500	3.000	1	0.750	EB19	\$501.60
BB6411964 4M	1.000	1.000	6.500	4.000	1	0.750	EB19	\$530.51
BB6411964 5M	1.000	1.000	7.500	5.000	1	0.750	EB19	\$574.51

INSERTS FOR THESE CUTTERS ARE BELOW

SPARE PARTS:

ALL EB15 INSERTS
SCREW: **BS15**
WRENCH: **BW15**

ALL EB19 INSERTS
SCREW: **BS19**
WRENCH: **BW19**



CARBIDE INSERTS FOR BALL END SERIES BB

PART #	BALL	A	B	T	T520	T530	NT56	NT33	NT13	NC57
					HONE=E LIST	HONE=E LIST	HONE=E LIST	HONE= E or F LIST	HONE=E LIST	HONE=E LIST
EB1458	0.625	0.625	0.375	0.125	\$15.72	\$15.72	\$13.57	\$13.57	\$13.57	\$14.84
EB1534	0.750	0.625	0.375	0.125	\$15.72	\$15.72	\$13.57	\$13.57	\$13.57	\$14.84
EB1978	0.875	0.750	0.500	0.156	\$18.78	\$18.78	\$16.62	\$16.62	\$16.62	\$17.88
EB191	1.000	0.750	0.500	0.156	\$18.78	\$18.78	\$16.62	\$16.62	\$16.62	\$17.88

MADE IN **USA**

Please Specify Hone:
E = Honed Edge
F = Sharp Edge

M = DENOTES MACHINABLE CARBIDE SHANK MACHINABLE CARBIDE CUTTERS ARE MADE TO ORDER AND ARE NOT RETURNABLE.
E = APPROXIMATE LENGTH

SUPERBEE® INDEXABLE TOOL
HOLDERS AND INSERTS

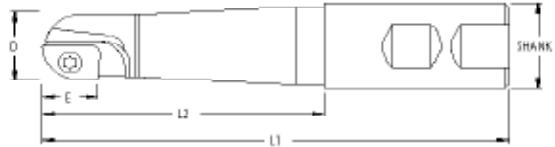
83



3° SERIES BBD BACKDRAFT BALL END CUTTERS



MADE IN USA



ALL OF THESE **SUPERBEE®** BACKDRAFT CUTTERS ARE MADE WITH A MACHINABLE CARBIDE SHANK

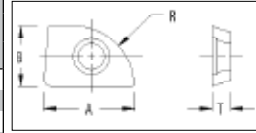
WELDON SHANK SERIES BBD

PART NUMBER	D	SHANK	L1	L2	FLUTES	E	INSERT	LIST
BBD40114643M	0.625	1.000	5.500	3.000	1	0.625	EB14	\$605.80
BBD40114644M	0.625	1.000	6.500	4.000	1	0.625	EB14	\$639.60
BBD48115804M	0.750	1.250	6.500	4.000	1	0.625	EB15	\$635.70
BBD48115805M	0.750	1.250	7.500	5.000	1	0.625	EB15	\$804.70
BBD64119804M	1.000	1.250	6.500	4.000	1	0.750	EB19	\$669.50
BBD64119805M	1.000	1.250	7.500	5.000	1	0.750	EB19	\$817.70
BBD64119806M	1.000	1.250	8.500	6.000	1	0.750	EB19	\$867.10
BBD64119968M	1.000	1.500	10.500	8.000	1	0.750	EB19	\$1,297.40

ALL OF THESE **SUPERBEE®** BACKDRAFT CUTTERS ACCOMMODATE ANY **SUPERBEE®** BALL END INSERT WHICH CAN BE FOUND BELOW!!

CARBIDE INSERTS FOR BACKDRAFT BALL END SERIES BBD

PART NUMBER	BALL	A	B	T	T520	T530	NT56	NT33	NT13	NC57
					HONE=E	HONE=E	HONE=E	HONE=E or F	HONE=E	HONE=E
LIST	LIST	LIST	LIST	LIST	LIST	LIST	LIST	LIST	LIST	LIST
EB1458	0.625	0.625	0.375	0.125	\$15.72	\$15.72	\$13.57	\$13.57	\$13.57	\$14.84
EB1534	0.750	0.625	0.375	0.125	\$15.72	\$15.72	\$13.57	\$13.57	\$13.57	\$14.84
EB1978	0.875	0.750	0.500	0.156	\$18.78	\$18.78	\$16.62	\$16.62	\$16.62	\$17.88
EB191	1.000	0.750	0.500	0.156	\$18.78	\$18.78	\$16.62	\$16.62	\$16.62	\$17.88



Hone: **E = Honed Edge** **F = Sharp Edge**

M = DENOTES MACHINABLE CARBIDE SHANK. **MACHINABLE CARBIDE** CUTTERS ARE MADE TO ORDER AND ARE **NOT** RETURNABLE.

E = APPROXIMATE LENGTH

SHELL MILL HOLDERS

STUB MILL ARBORS

MADE OF HARDENED STEEL AND PRECISION GROUND, THESE ARBORS ARE DESIGNED TO FIT DIRECTLY INTO STANDARD END MILL ADAPTERS.



MADE IN USA



MADE IN USA

PART NO.	SIZE SHANK X MILL ARBOR	ARBOR THREAD	KEY SIZE	FACE DIA.	O.A.L.	LIST
HSM3434	.750 X .750	3/8" - 24	5/16"	2.000	3.200	\$102.84
HSM341	.750 X 1.000	1/2" - 20	3/8"	2.375	3.200	\$112.57
HSM134	1.000 X .750	3/8" - 24	5/16"	2.000	3.700	\$112.64
HSM11	1.000 X 1.000	1/2" - 20	3/8"	2.375	3.700	\$115.50
HSM11434	1.250 X .750	3/8" - 24	5/16"	2.000	3.700	\$124.60
HSM1141	1.250 X 1.000	1/2" - 20	3/8"	2.375	3.700	\$127.33

PART NO.	SIZE SHANK X MILL ARBOR	O.A.L.	LIST
SMA341	.750 X 1.000	5.000	\$104.08
SMA34114	.750 X 1.250	5.000	\$134.60
SMA11	1.000 X 1.000	5.500	\$114.12
SMA1114	1.000 X 1.250	5.500	\$135.86
SMA114114	1.250 X 1.250	5.500	\$132.40
SMA114112	1.250 X 1.500	5.500	\$144.89

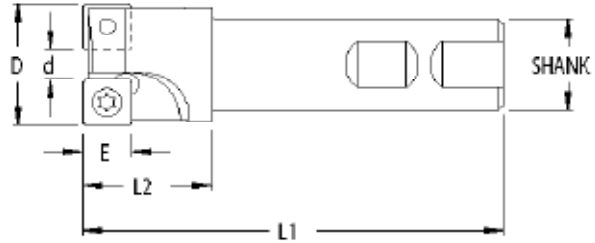
SUPERBEE® INDEXABLE TOOL HOLDERS AND INSERTS

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SERIES CB

COUNTERBORE CUTTERS



SUPERBEE® MADE IN AMERICA

ALL OF THESE **SUPERBEE®** COUNTERBORE CUTTERS ACCOMMODATE SD/SP STYLE INSERTS.

**WELDON SHANK
SERIES CB**

MADE IN USA

PART NO.	CAP SCREW	D= DIA.	d= MIN. HOLE SIZE W / .015	RADIUS INSERT	SHANK	L1	L2	FLUTES	E	INSERT	LIST
CB3212140	5/16"	0.500	0.125	0.125	0.625	3.250	1.000	1	0.245	SD21.5	\$105.60
CB3813240	3/8"	0.594	0.125	0.625	0.625	3.250	1.000	1	0.370	SP32	\$105.60
CB4013240	3/8"	0.625	0.125	0.625	0.625	3.250	1.000	1	0.370	SP32	\$106.70
CB4413248	7/16"	0.687	0.125	0.750	0.750	3.250	1.000	1	0.370	SP32	\$113.85
CB4822248	7/16"	0.750	0.290	0.750	0.750	3.250	1.000	2	0.245	SD22	\$142.45
CB5013248	1/2"	0.781	0.125	0.750	0.750	3.250	1.000	1	0.370	SP32	\$149.60
CB5022248	1/2"	0.781	0.321	0.750	0.750	3.250	1.000	2	0.245	SD22	\$149.60
CB5622248	9/16"	0.875	0.415	0.750	0.750	3.250	1.000	2	0.370	SD22	\$149.60
CB6423248	5/8"	1.000	0.290	0.750	0.750	3.250	1.000	2	0.370	SP32	\$161.70
CB6823248	5/8"	1.062	0.352	0.750	0.750	3.250	1.000	2	0.370	SP32	\$166.10
CB7633264	3/4"	1.187	0.477	1.000	4.250	1.000	3	0.370	SP32	\$182.05	
CB8033264	3/4"	1.250	0.540	1.000	4.250	1.000	3	0.370	SP32	\$198.00	
CB8834264	7/8"	1.375	0.415	1.000	4.250	1.000	3	0.495	SP42	\$224.40	
CB9634264	1"	1.500	0.540	1.000	4.250	1.000	3	0.495	SP42	\$237.60	

INSERTS FOR THESE CUTTERS ARE BELOW

SPARE PARTS:

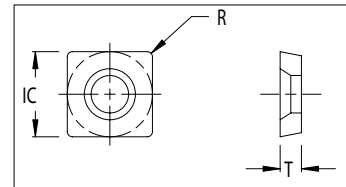
ALL SD2 INSERTS
SCREW: **TS25(S)**
WRENCH: **NT8**

ALL SP3 INSERTS
SCREW: **CS5**
WRENCH: **NT9**

ALL SP4 INSERTS
SCREW: **CS6**
WRENCH: **NT15**

CARBIDE INSERTS FOR COUNTERBORE **SERIES CB**

PART NO.	R	IC	T	T520	T530	NT56	NT33	NT13
				HONE=E	HONE=E	HONE=E	HONE=E or F	HONE=E
				LIST	LIST	LIST	LIST	LIST
SD21.5015	0.015	0.250	0.094	\$12.77	\$12.77	\$10.73	\$10.73	\$10.73
SD21.5030	0.030	0.250	0.094	\$12.77	\$12.77	\$10.73	\$10.73	\$10.73
SD21.5060	0.060	0.250	0.094	\$12.77	\$12.77	\$10.73	\$10.73	\$10.73
SD22010	0.010	0.250	0.125	\$15.19	\$15.19	\$13.15	\$13.15	\$13.15
SD22015	0.015	0.250	0.125	\$12.77	\$12.77	\$10.73	\$10.73	\$10.73
SD22030	0.030	0.250	0.125	\$12.77	\$12.77	\$10.73	\$10.73	\$10.73
SD22060	0.060	0.250	0.125	\$15.19	\$15.19	\$13.15	\$13.15	\$13.15
SP32010	0.010	0.375	0.125	\$14.48	\$14.48	\$12.43	\$12.43	\$12.43
SP32015	0.015	0.375	0.125	\$12.06	\$12.06	\$10.01	\$10.01	\$10.01
SP32030	0.030	0.375	0.125	\$12.06	\$12.06	\$10.01	\$10.01	\$10.01
SP32060	0.060	0.375	0.125	\$14.48	\$14.48	\$12.43	\$12.43	\$12.43
SP32090	0.090	0.375	0.125	\$16.29	\$16.29	\$14.25	\$14.25	\$14.25
SP42010	0.010	0.500	0.125	\$14.72	\$14.72	\$12.54	\$12.54	\$12.54
SP42015	0.015	0.500	0.125	\$13.29	\$13.29	\$11.11	\$11.11	\$11.11
SP42030	0.030	0.500	0.125	\$13.29	\$13.29	\$11.11	\$11.11	\$11.11
SP42060	0.060	0.500	0.125	\$14.72	\$14.72	\$12.54	\$12.54	\$12.54
SP42090	0.090	0.500	0.125	\$16.53	\$16.53	\$14.36	\$14.36	\$14.36



Please Specify Hone: **E = Honed Edge** **F = Sharp Edge**

E = APPROXIMATE LENGTH

**SUPERBEE® INDEXABLE TOOL
HOLDERS AND INSERTS**

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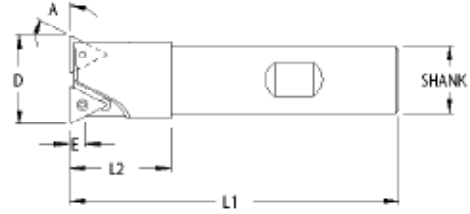


SERIES DT

DOVETAIL CUTTERS



MADE IN USA



PART NUMBER	D	SHANK	L1	L2	ANGLE	FLUTES	E	INSERT	WRENCH	SCREW	LIST
DT4813240A60	0.750	0.625	3.375	1.000	60°	1	0.211	TCMT32.5	NT15	TS4	\$86.35
DT6422148A60	1.000	0.750	4.250	1.000	60°	2	0.149	TCMT21.5	NT8	TS25	\$130.90
DT11233264A60	1.750	1.000	4.750	1.500	60°	3	0.211	TCMT32.5	NT15	TS4	\$184.80

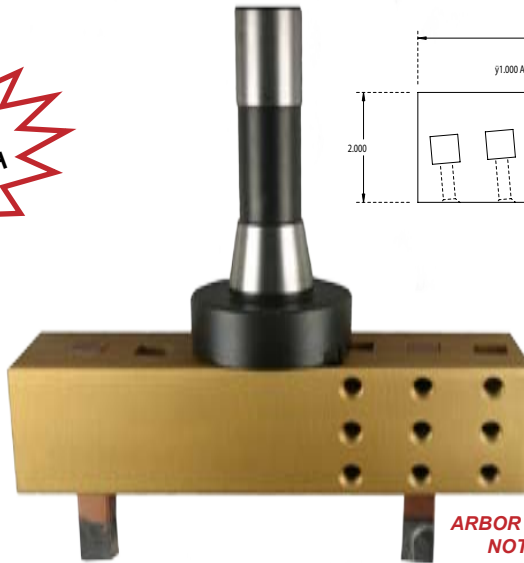
Dovetail cutters use standard TCMT inserts

SUPERFLY-2

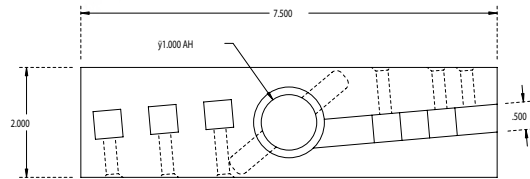
FLY CUTTERS



**uses standard shell mill holder w/ 1" arbor*



ARBOR AND TOOLBITS NOT INCLUDED



PART NO.	CUTTING DIAMETER	FLUTES	AH	OUTSIDE DIMENSIONS	INSERT	LIST
SUPERFLY-2	3.00 - 10.00	1	1.000	2.000H x 2.000W x 7.500L	.500 SQ. TOOLBIT	\$163.87

MADE IN USA

SUPERBEE® INDEXABLE TOOL HOLDERS AND INSERTS

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BORING BARS

INDUSTRY STANDARD BORING BARS - 80° DIAMOND POSITIVE RAKE
STEEL INTEGRATED SHANKS (S)

OR

MACHINABLE CARBIDE INTEGRATED SHANKS (M)

Use your own industry standard inserts.



USES INDUSTRY STANDARD CCMT OR TCMT INSERTS

PART NUMBER	MIN. BORE DIAMETER	SHANK	H	F	K	L1	L2	INSERT	SCREW	WRENCH	LIST
SSCLCR-062S	0.500	0.375	0.340	0.250	12°	5.000	0.625	CCMT21.5	TS25	NT8	\$73.64
SSCLCR-062M	0.500	0.375	0.340	0.250	12°	6.000	0.625	CCMT21.5	TS25	NT8	\$154.70
SSCLCR-082S	0.625	0.500	0.460	0.313	10°	5.000	0.750	CCMT21.5	TS25	NT8	\$79.14
SSCLCR-082M	0.625	0.500	0.460	0.313	10°	6.000	0.750	CCMT21.5	TS25	NT8	\$245.70
SSCLCR-103S	0.812	0.625	0.560	0.406	10°	7.000	1.250	CCMT32.5	TS4	NT15	\$98.95
SSCLCR-103M	0.812	0.625	0.560	0.406	10°	7.000	1.250	CCMT32.5	TS4	NT15	\$305.50
SSCLCR-123S	1.000	0.750	0.700	0.500	8°	8.000	1.875	CCMT32.5	TS4	NT15	\$108.85
SSCLCR-123M	1.000	0.750	0.700	0.500	8°	8.000	1.875	CCMT32.5	TS4	NT15	\$453.70
SSCLCR-163S	1.281	1.000	0.910	0.641	7°	12.000	2.500	CCMT32.5	TS4	NT15	\$175.94
SSCLCR-163M	1.281	1.000	0.910	0.641	7°	12.000	2.500	CCMT32.5	TS4	NT15	\$635.70

"S" AT THE END OF THE ORDER NUMBER IS FOR STEEL OR "M" FOR MACHINABLE CARBIDE INTEGRATED SHANK.
 USES SECO/CARBOLOY, SANDVIK, TOSHIBA, VALENITE, RTW, MITSUBISHI OR ANY STANDARD CCMT OR TCMT INSERTS

INDUSTRY STANDARD BORING BARS - TRIANGLE POSITIVE RAKE

STEEL INTEGRATED SHANKS (S)

OR

MACHINABLE CARBIDE INTEGRATED SHANKS (M)

Use your own industry standard inserts.



USES INDUSTRY STANDARD CCMT OR TCMT INSERTS

PART NUMBER	MIN. BORE DIAMETER	SHANK	H	F	K	L1	L2	INSERT	SCREW	WRENCH	LIST
SSTUCR-062S	0.500	0.375	0.340	0.250	12°	5.000	0.625	TCMT21.5	TS25	NT8	\$73.64
SSTUCR-062M	0.500	0.375	0.340	0.250	12°	6.000	0.625	TCMT21.5	TS25	NT8	\$154.70
SSTUCR-082S	0.625	0.500	0.460	0.313	10°	5.000	0.750	TCMT21.5	TS25	NT8	\$79.14
SSTUCR-082M	0.625	0.500	0.460	0.313	10°	6.000	0.750	TCMT21.5	TS25	NT8	\$245.70
SSTUCR-103S	0.812	0.625	0.560	0.406	10°	7.000	1.250	TCMT32.5	TS4	NT15	\$98.95
SSTUCR-103M	0.812	0.625	0.560	0.406	10°	7.000	1.250	TCMT32.5	TS4	NT15	\$305.50
SSTUCR-123S	1.000	0.750	0.700	0.500	8°	8.000	1.875	TCMT32.5	TS4	NT15	\$108.85
SSTUCR-123M	1.000	0.750	0.700	0.500	8°	8.000	1.875	TCMT32.5	TS4	NT15	\$453.70
SSTUCR-163S	1.281	1.000	0.910	0.641	7°	12.000	2.500	TCMT32.5	TS4	NT15	\$175.94
SSTUCR-163M	1.281	1.000	0.910	0.641	7°	12.000	2.500	TCMT32.5	TS4	NT15	\$635.70

"S" AT THE END OF THE ORDER NUMBER IS FOR STEEL OR "M" FOR MACHINABLE CARBIDE INTEGRATED SHANK.
 USES SECO/CARBOLOY, SANDVIK, TOSHIBA, VALENITE, RTW, MITSUBISHI OR ANY STANDARD CCMT OR TCMT INSERTS

SUPERBEE® INDEXABLE TOOL HOLDERS AND INSERTS

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STANDARD MILLING INSERTS

MADE IN
U.S.A.

MADE IN
U.S.A.

MADE
IN **USA**

STANDARD MILLING INSERTS					PICTURE
PART NUMBER	T520 LIST	NT5T LIST	NT33 LIST	NT56 LIST	
FITS SANDVIK, MITSUBISHI, AND SECO					
SECN42AFE	\$7.68	\$6.95	\$5.56	\$5.56	
SECN42AFF	\$7.68	\$6.95	\$5.56	\$5.56	
SEEN42AFE	\$7.68	\$6.95	\$5.56	\$5.56	
SEEN42AFF	\$7.68	\$6.95	\$5.56	\$5.56	
SECN42EFE	\$7.68	\$6.95	\$5.56	\$5.56	
SECN42EFF	\$7.68	\$6.95	\$5.56	\$5.56	
SEEN42EFE	\$7.68	\$6.95	\$5.56	\$5.56	
SEEN42EFF	\$7.68	\$6.95	\$5.56	\$5.56	
FITS KENAMETAL® AND VALENTINE®					
SEEW43AFE	\$14.72	\$13.32	\$12.41	\$12.41	
FITS SANDVIK					
SEM43AFE	\$10.35	\$10.45	\$8.04	\$8.04	
SPG 421	\$8.16	\$7.70	\$5.98	\$5.98	
SPG 422	\$8.16	\$7.70	\$5.98	\$5.98	
SPG 423	\$8.16	\$7.70	\$5.98	\$5.98	
SPG 631	\$13.16	\$13.55	\$10.45	\$10.45	
SPG 632	\$13.09	\$13.55	\$10.45	\$10.45	
SPG 633	\$13.16	\$13.55	\$10.45	\$10.45	
ALSO FITS SPG TYPE FACE MILLS					
SPKN42EER	\$6.69	\$5.94	\$4.51	\$4.51	
SPKN42EFR	\$6.69	\$5.94	\$4.51	\$4.51	
TPG321	\$6.94	\$6.38	\$4.90	\$4.90	
TPG322	\$6.94	\$6.38	\$4.90	\$4.90	
TPG323	\$6.94	\$6.38	\$4.90	\$4.90	
TPG431	\$9.02	\$9.13	\$6.71	\$6.71	
TPG432	\$9.02	\$9.13	\$6.71	\$6.71	
TPG433	\$9.02	\$9.13	\$6.71	\$6.71	
ALSO FITS TPG TYPE FACE MILLS					
TPKN32PER	\$5.83	\$5.69	\$3.78	\$3.78	
TPKN32PFR	\$5.83	\$5.69	\$3.78	\$3.78	
TPKN43PER	\$8.04	\$8.60	\$5.73	\$5.73	
TPKN43PFR	\$8.04	\$8.60	\$5.73	\$5.73	

ELIMINATING STOCK

**CALL FOR SPECIAL
PRICING
WHILE SUPPLIES LAST**

SUPERBEE® ACCESSORIES



MADE IN **USA**



PART NO.	LIST
WRENCHES	
BW15 (T-15)	\$8.53
BW19 (T-20)	\$8.53

PART NO.	LIST
FLAG WRENCHES	
NT8 (T-8)	\$4.85
NT9 (T-9)	\$5.18
NT15 (T-15)	\$6.82
NT19 (T-19)	\$6.82

PART NO.	LIST
SCREWS	
BS15	\$1.56
BS19	\$1.56

PART NO.	LIST
SCREWS	
TS25	\$1.87
CS3	\$1.56
CS5	\$1.56
CS6	\$1.87
TS4	\$1.87

SUPERBEE® INDEXABLE TOOL
HOLDERS AND INSERTS

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NEW-LUBE®

Modular Micro-Spray Applicators & Fluids

PATENT NUMBER 5,086,878 AND 5,333,640



NEW!

THE 2009 NEW-LUBE MICRO-SPRAY
APPLICATOR IS OUR MOST RELIABLE
APPLICATOR EVER!

SEE PAGE 90 FOR DETAILS



MADE IN
U.S.A.

NEW-LUBE®

MADE IN
U.S.A.

MODULAR SPRAY APPLICATOR SYSTEMS

**The best micro spray applicator on the market
watch it work for you.**

New Micro metered pump IS driven by air supply which automatically maintains proportionate air to lube ratios. This revolutionary pump design automatically increases or decreases the the amount of fluid dispensed, and keeps direct proportion to any increase or decrease in desired air flow. You can see it work! In addition, adjustments in ratio of air to fluid can be regulated as desired with the simple adjustment of a needle valve located in the sight dome. *Now with a larger break resistant reservoir*

NEW!



NEW-LUBE OZONE FRIENDLY
LUBRICATION PRODUCTS

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Don't work around your lubricant system. Strong magnets let you mount the hose in a convenient place. Durable plastic hose facilitates your aim. Tips are replaceable and come with either 1/8" or 1/16" diameter holes.

PATENT PENDING

NEW! Larger break-resistant reservoir holds hours of NEW-LUBE fluid.

This optional solenoid or air pilot valve lets your CNC machinery control the flow. Program lubricant delivery on and off with CNC M-code. Available in 110VAC or 24VDC.

Our patented flow splitter provides equal distribution of air and fluid to as many as 18 lines.

OUR MODULAR FLOW SPLITTER.

You told us that as much as you liked our NEW-LUBE micro-spray applicator, you would like it more if you could add hoses. The problem? Until now there wasn't a way to keep the flow equal among a number of outlets. We've removed that restriction. If you already own a NEW-LUBE applicator you can get a splitter as a modular component and add up to six hoses.



Patent Number 5,333,640



NEW-LUBE®

MODULAR SPRAY APPLICATOR SYSTEMS

SIMPLY A BETTER APPLICATOR

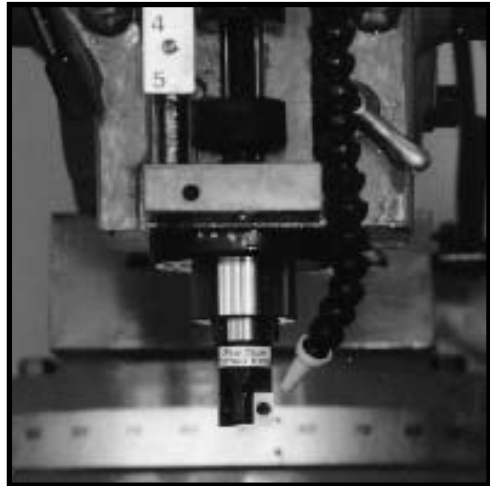
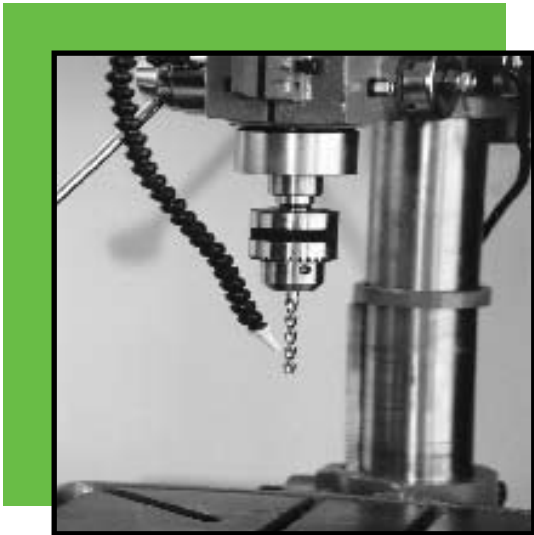
MADE IN
U.S.A.

Patent Numbers 5,086,878 & 5,333,640

This simple comparison will show you that the **NEW-LUBE®** applicator is easier to use, more versatile and less expensive than other similar applicator units!

NEW-LUBE®	COMPETITION
MODULAR COMPONENTS - CHANGE ANYTIME	YOU'RE STUCK
1/3 to 1/4 the cost of the competition.	\$600.00 to \$900.00
New revolutionary self driven pump	One pulse every three seconds.
Accurate and truly measurable applicator can be conveniently turned off/on at the nozzle.	Put hand in front of nozzle and guess.
Set the fluid flow without help or guesswork (4 drops per minute).	Must be turned on/off at box.
Automatic variable fluid to air ratio. Fluid increases or decreases proportionately with adjustments to air flow.	Sales Representative must train customer on setup and adjustment.
Consistent and continuous delivery of fluid	Adjust Adjust again... Adjust again...
Less than 1/2 the air consumption (20 psi min.) 1/2 CFM. Our air regulator means NO PROBLEM with fluctuations in shop air!	Actuator valves, Pumps, Timers.
	More than twice the air consumption (60 psi min.) 2X CFM. And because of the high air requirement fluctuations in shop air can be a problem.

Apply **NEW-LUBE®** lubricant to the face of the cutting edge of the tool before the tool enters the cut. The closer the nozzle is to the tool the better. Ideally the distance should be 1" to 4".



NEW-LUBE OZONE FRIENDLY
LUBRICATION PRODUCTS

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INVEST IN ANY OF THESE NEW-LUBE® STANDARD MODULAR MICRO-SPRAY APPLICATORS...



Shown: NL1M

NL1M
(applicator, one
hose, magnetic
mount, completely
assembled)

Sale Price: \$255.00

**NL1MS110AC or
NL1MS24DC**
(adds 110V or 24V
solenoid for electric
activation)

Sale Price:
NL1MS110AC = \$305.00
NL1MS24DC = \$305.00

NL1MAP
(adds air pilot valve
for air activation)

Sale Price: \$305.00



Shown: NL2M

NL2M
(applicator, two
hoses, magnetic
mounts, completely
assembled)

Sale Price: \$295.00

**NL2MS110AC or
NL2MS24DC**
(adds 110V or 24V
solenoid for electric
activation)

Sale Price:
NL2MS110AC = \$345.00
NL2MS24DC = \$345.00

NL2MAP
(adds air pilot valve
for air activation)

Sale Price: \$345.00



Shown: NL3M

NL3M
(applicator, three
hoses - our unique
splitter guarantees
equal streams -
magnetic mounts)

Sale Price: \$398.00

**NL3MS110AC or
NL3MS24DC**
(adds 110V or 24V
solenoid for electric
activation)

Sale Price:
NL3MS110AC = \$445.00
NL3MS24DC = \$445.00

NL3MAP
(adds air pilot valve
for air activation)

Sale Price: \$445.00



Shown: NL4M

NL4M
(applicator, four
hoses - our unique
splitter guarantees
equal streams -
magnetic mounts)

Sale Price: \$468.50

**NL4MS110AC or
NL4MS24DC**
(adds 110V or 24V
solenoid for electric
activation)

Sale Price:
NL4MS110AC = \$518.50
NL4MS24DC = \$518.50

NL4MAP
(adds air pilot valve
for air activation)

Sale Price: \$518.50



Shown: NL5MAP

NL5M
(applicator, five
hoses - our unique
splitter guarantees
equal streams -
magnetic mounts)

Sale Price: \$520.50

**NL5MS110AC or
NL5MS24DC**
(adds 110V or 24V
solenoid for electric
activation)

Sale Price:
NL5MS110AC = \$570.50
NL5MS24DC = \$570.50

NL5MAP
(adds air pilot valve
for air activation)

Sale Price: \$570.50



Shown: NL6M

NL6M
(applicator, six hoses
- our unique splitter
guarantees equal
streams - magnetic
mounts)

Sale Price: \$548.50

**NL6MS110AC or
NL6MS24DC**
(adds 110V or 24V
solenoid for electric
activation)

Sale Price:
NL6MS110AC = \$598.50
NL6MS24DC = \$598.50

NL6MAP
(adds air pilot valve
for air activation)

Sale Price: \$598.50



NEW-LUBE®

MADE IN
U.S.A.

MADE IN
U.S.A.

...OR BUILD A CUSTOM UNIT USING THE NEW-LUBE® MODULAR COMPONENTS.

MODULAR COMPONENTS make our applicator easier to operate, more versatile and more cost effective than any other unit! Use with nearly any tool or cutting operation including: milling, turning, drilling, tapping, reaming, grinding, sawing, punch and die, and stamping. The **NEW-LUBE®** MODULAR COMPONENT APPLICATOR is the all-around best cutting tool and metal working lubrication system.

BASE UNIT NLBM



Sale Price: \$198.00

Our unique patented design is the best in the industry. The deatomization chamber nearly eliminates airborne particles. Supplied with bracket and magnets.
Order No.: **NLBM**

SOLENOID NLSM110/NLSM24V



Sale Price: \$55.95

Let your CNC control the lubricant flow with our durable solenoids. Specify modular or in-line.
Order No.:
NLSM110V for 110V AC
NLSM24V for 24V DC
In-line: NLSI110V or NLSI24V

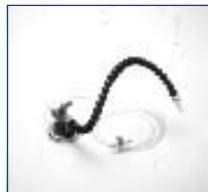
AIR PILOT VALVE NLMAP



Sale Price: \$55.95

If air controls your production apparatus, use these handy valves to coordinate your coolant flow. Specify modular or in-line.
Order No.: **NLMAP**
Modular

SECOND HOSE KIT NL2HK



Sale Price NL2HK: \$59.95

Sale Price NLHAC: \$50.00 (does not include "T" coupling)

Need to add or replace a second hose to your original unit? Replacement tips also available. Order No.:
NL2HK 2nd Hose Kit (complete)
NLHAC 2nd Hose Kit

HOSE ASSEMBLY NLHA



Sale Price: \$12.00

Need to replace a hose to your original unit?
Order No.:
NLHA (hose only)

Patent Number 5,086,878 & 5,333,640

HOSE TIPS NLT1/16 AND NLT1/8



Sale Price: \$3.96/pk of 2

Replacement tips also available.
Order No.:
NLT1/16 or **NLT1/8** (tips only)

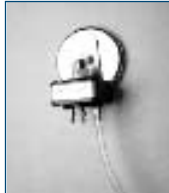
TWO HOSE SPLITTER NLFS2



Sale Price: \$79.00

Sure, you could add hoses to a micro-spray applicator, but without our modular flow splitters you'll have one hose blasting out 70% and the rest nearly dry. We've solved that problem with these carefully engineered and tested modular component flow splitters. No other company offers this advantage and you can rest assured that the longevity of these devices is what you've come to expect from **NEW-LUBE®** products.

THREE HOSE SPLITTER NLFS3



Sale Price: \$89.00

FOUR-HOSE SPLITTER NLFS4



Sale Price: \$125.00

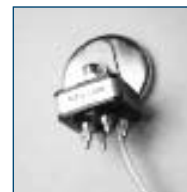
Each splitter comes complete with fittings, bracket, and magnetic mount.

FIVE-HOSE SPLITTER NLFS5



Sale Price: \$150.00

SIX-HOSE SPLITTER NLFS6



Sale Price: \$155.00

NEW-LUBE OZONE FRIENDLY
LUBRICATION PRODUCTS

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NEW-LUBE®

MADE IN
U.S.A.

MADE IN
U.S.A.

NOW INDUSTRY CAN AFFORD TO PROTECT THE ENVIRONMENT **NEW-LUBE®**

Protect the environment and improve productivity.

MAXIMIZES PRODUCTIVITY AND PROFITABILITY

Cut down on machine time. Less friction and heat means higher feed rates. **NEW-LUBE®** reduces friction better than flood coolants.

SIMPLIFIES CLEAN UP

NEW-LUBE® is used in small quantities leaving little residual fluid on the machine or parts.

SAFER WORKING ENVIRONMENT FOR YOUR EMPLOYEES

No cutting fluid on the floor. No hazardous materials.

INCREASES TOOL LIFE

High lubricity and viscosity means less heat and friction on the cutting edge.

MADE
IN USA



AVOIDS MIST IN THE AIR

NEW-LUBE® applicators spray, they do not atomize the lubricant so there are very few air-borne particles. Environmentally safe.

PROVIDES BETTER SURFACE FINISHES

Helps eliminate tears and smears.

ELIMINATES THE NEED FOR FLOOD COOLANTS IN MOST OPERATIONS.

Less maintenance on machines. No reporting problems with the government. Allows a clear view of the workpiece.

REDUCES COOLANT DISPOSAL PROBLEMS

NEW-LUBE® is consumed in the cut, so there is nothing to dispose of. It's biodegradable and ecologically safe.

"**NEW-LUBE®** LUBRICANTS FOR ALL YOUR CUTTING TOOL NEEDS"

NLF1000HD - "THE CADILLAC OF LUBRICANTS" Heavy duty with EPA (Extreme Pressure Additive). Available in 1, 5, and 55 gallon containers. Ask for part numbers NLF1001HD for 1 gallon (\$79.98), NLF1005HD for 5 gallons (\$379.98), or NLF1055HD for 55 gallons (\$3798.98).

NLF1000 - Heavy duty. Available in 1, 5, and 55 gallon containers. Ask for part numbers NLF1001 for 1 gallon (\$79.98), NLF1005 for 5 gallons (\$379.98), or NLF1055 for 55 gallons (\$3798.98).

NLFE1000 - Same as the above with an emulsifier. Heavy duty. Available in 1, 5, and 55 gallon containers. Ask for part numbers NLFE1001 for 1 gallon (\$79.98), NLFE1005 for 5 gallons (\$379.98), or NLFE1055 for 55 gallons (\$3749.98).

NLFC1000 - Our "PURE" lubricant. No emulsifier. No color. Available in 1, 5, and 55 gallon containers. Ask for part numbers NLFC1001 for 1 gallon (\$79.98), NLFC1005 for 5 gallons (\$379.98), or NLFC1055 for 55 gallons (\$3749.98).

NLF2000 - Medium to heavy duty lubricant. Available in 1, 5, and 55 gallon containers. Ask for part numbers NLF2001 (\$69.98), NLF2005 (\$329.98), NLF2055 (\$3298.98).

NLF6000 - Medium duty for aluminum extrusion. Available in 1, 5, and 55 gallon containers. Ask for part numbers NLF6001 (\$59.98), NLF6005 (\$279.98), NLF6055 (\$2798.98).

NLP1000 - Our paste product. Available in 16 oz. containers. Ask for part number NLP1016 (\$15.79).

NLB1000 - The block form of **NEW-LUBE®**. Available in 4.4 oz. bars packaged 6 per pack-4 packs per case. Ask for part number NLB1000 (\$19.98 per 6 pack. \$79.92 per case - 24 in case).

NEW-TAP® TAPPING FLUIDS

NEW-TAP® Heavy Duty - . For tough jobs. Highest in lubricity. Same as **NEW-TAP®**. Safe EP additive. Environmentally safe. Available in 1 gallon (\$59.98), 5 gallons (\$294.98), 55 gallons (\$2949.98)

NEW-TAP® - Tapping, reaming, and threading fluid that has superior lubricity and is completely environmentally safe. Available in 1 gallon (\$49.98), 5 gallons (\$244.98), 55 gallons (\$2449.98)

ENVIRONMENTALLY SAFE • NO OZONE DEPLETING CHEMICALS

Patent Number 5,086,878 & 5,333,640

NEW-LUBE OZONE FRIENDLY
LUBRICATION PRODUCTS

94



NEW-TAP FLUID™ - A Cutting Fluid That Obeys THE LAW OF NATURE



It's the law. To be in compliance with Title VI of the Clean Air Act Amendments of 1990, since May 15, 1993, any product made using a chemical known to damage the ozone layer must be so labeled.

Not the kind of tag most of us want on the parts we labored hard to bring to market. But, cutting fluids containing ODC's (ozone depleting chemicals) are not the only ones that are effective to do the job. You now have a better option: **NEW-TAP FLUID™**.

NEW-TAP FLUID™ does not contain Petroleum Distillates; does not contain 1,1,1-Trichlorethane; does not contain Chlorine or Sulphur Additives; and does not contain ODC's of any kind. It's biodegradable and environmentally sound, yet has superior lubricity for maximum tool life. Use it for tapping, drilling, reaming, broaching, or threading.

For **NEW-TAP FLUID™** or any of our earth-friendly products, including **NEW-LUBE®** fluid, paste, blocks, or modular micro-spray applicators call **Swift Carb TODAY!**



Swift Carb • 1720 South Central Ave. • Kent, Washington 98032
1-800-227-9876, Fax: 1-800-225-9876 • visit our website at SWIFTCARB.com

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NEW-LUBE OZONE FRIENDLY
LUBRICATION PRODUCTS

95



SPECIAL CARBIDE END MILLS



Swift-CARB CNC™

A division of NEW TECH CUTTING TOOLS

FAST DELIVERY

QUOTATION
Valid for 30 days

5 AXIS CNC PRECISION GROUND MICRO GRAIN CARBIDE END MILLS

Typically when a special end mill is ordered from a manufacturer, the wait can be weeks, sometimes even months. However, at **Swift-CARB** CNC™ we understand the importance of fast turnaround, high production rates, and little to no down time. Please provide us with all of the information requested below so that we can manufacture a superior carbide tool for your application.

PLEASE FAX YOUR QUOTE REQUEST TO 1.800.225.9876

Distributor: _____

Contact: _____ Phone: _____

Fax: _____

Type of material: _____ Hardness: _____ Horsepower of machine: _____

Maximum RPM's: _____ Depth of cut: _____ Width of cut: _____

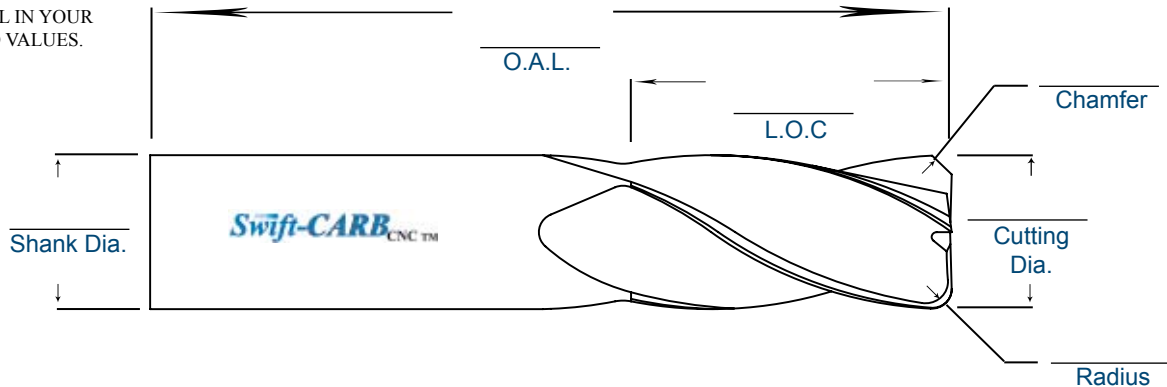
Quantity: _____ \$: _____	Quantity: _____ \$: _____	Quantity: _____ \$: _____
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STYLE OR GEOMETRY OF TOOL - CHECK ALL THAT APPLY

"SC" ALUMINUM 2 or 3 FL
 "SS" STAINLESS 3FL
 "SM" ALLOYS 5FL
 "SF" FINISHING 6FL
 STANDARD 2,4, & 6 FL

NUMBER OF FLUTES:
 2
 3
 4
 5
 6
 OTHER _____

PLEASE FILL IN YOUR
REQUIRED VALUES.



CUTTER ROTATION:
 RH
 LH
 HELIX:
 RH
 LH
 HELIX ANGLE IN DEGREES: _____

TYPE:
 STRAIGHT
 TAPERED - PER SIDE ANGLE IN DEGREES: _____
 BALL
 SQUARE END

WELDON FLATS
 OTHER _____

Special tooling orders may be subject to standard over/under-shipment policies, not to exceed the greater of 10%, or 1 tool.

Swift-CARB CNC™

MADE IN USA



SUPERBEE®

***Indexable Carbide Radius, Angle,
and Special Form Cutters***



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OVER 130 RADII AND FORMS IN STOCK!